

## **Fresco-IP IPCM Management Software User Manual**

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# Overview

IPCM management software is the main software of control terminal of IP stream multi-viewer products, responsible for design of layout, management of layout resources and interaction with resources in multi-viewer chassis and so on. It is capable for flexible layout design by use of user interface operation, and can be connected with multi-viewer chassis via network to perform real-time interaction for layout resources, control message, control command and so forth.

# 1 Introduction

## 1.1 Software Components

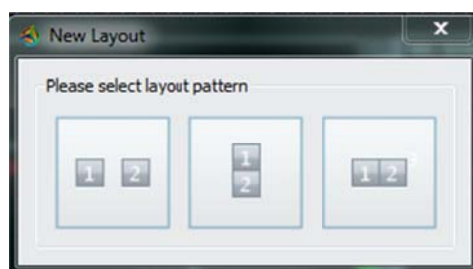
The embedded multi-viewer software can be classified into device terminal software and control terminal software by deployment location. The former is installed in Windows OS of multi-viewer chassis, and the later one will be installed in remote control terminal (such as laptop, workstations in LAN), mainly used for layout design, templates management, resource scheduling and device control.

## 1.2 Terminology

1) **Physical screen**: the video terminal (LCD screen, LCD monitor) which connected with HDMI outputs of multi-viewer chassis is known as physical screen. one multi-viewer chassis can provide up to 2 independent HDMI outputs, Different physical screens for different output interfaces. the maximum length of HDMI transmission is 15m.

2) **Logical screen**: in customer's view, the contents displayed on multiple screens may be logical relevance, for example, one physical screen is used for displaying top half of video, and another screen is used for displaying bottom half of video. Or one physical screen is used for displaying left half of video, and another screen is used for displaying right half of video. These related physical screens displayed by defined layout are considered as logically related. These logically related physical screens can be seen as a big screen composed of multiple screens, and this big screen is defined as **logical screen**.

3) **Screen combination**: 2 physical screens can be jointed to 1-2 logical screens, the condition of jointing 2 screens to any one type of logical screen is known as **screen combination**



4) **Layout template:** For one screen combination, the preset layout prepared for each logical screen is called **layout template**. There are two kinds of information included in layout template: screen combination information (resolution after combination) and layout information for each logical screen.

5) **Display elements:** The objects used for designing layouts are **display elements**, including video, audio meter, UMD, analog clock, digital clock, date, text frame, alarm frame, metadata and image.

6) **Device interfaces:** each multi-viewer chassis has 2 Gigabit NIC ports, 2 HDMI outputs, 1 headphone interface, 2 line-out, 1 COM port, dual power supply interfaces, all ports like these are called **device interfaces**.

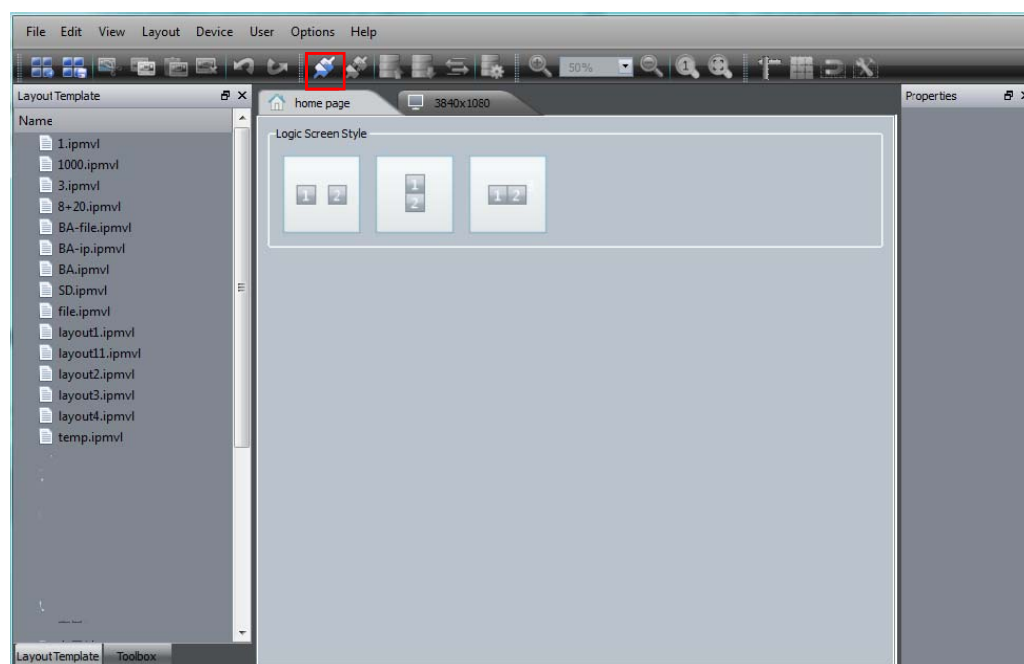
7) **Synchronization(Upload):** the process which upload layouts designed in control terminal software to device terminal and use them in device terminal.


8) **Resource files:** those image files, audio files, video files which will be used in layout templates are called **resource files**

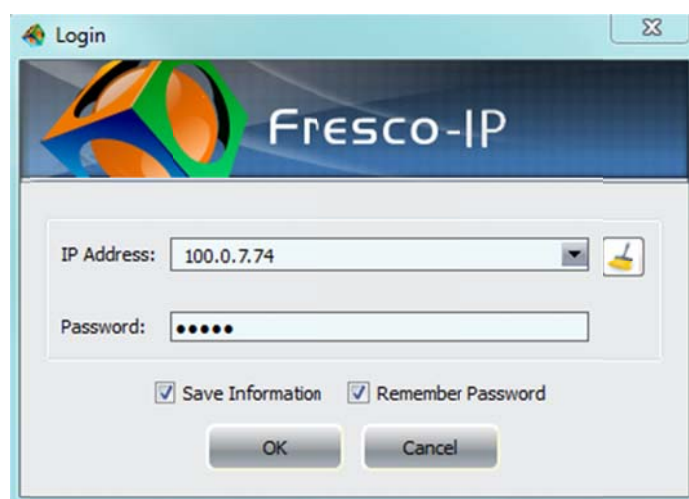
## 1.3 User Interface Layout

1. Run IPCM management software to enter main user interface.







2. Press  to pop-up login window.



3. In login window, the meaning of relative parameters are depicted as following:

『IP Address』 : Input IP address of connecting multi-viewer chassis, for example: 100.0.7.74. IPCM management software, as control terminal software, would connect various Fresco chassis according to IP address. IP will be saved after input one time, users just need to click  and choose a IP from drop down list when connect same chassis.

『Password』 : The default password of Fresco is "admin", users can modify it when first time login.

『Save Information』 : If this option is checked, IP address will be saved after first time input, users just need to click  and choose a IP from drop down list when connect same chassis.

『Remember Password』 : If this option is checked, the system will remember corresponding password. when next time login, users just need to input IP while do not need to input password again.

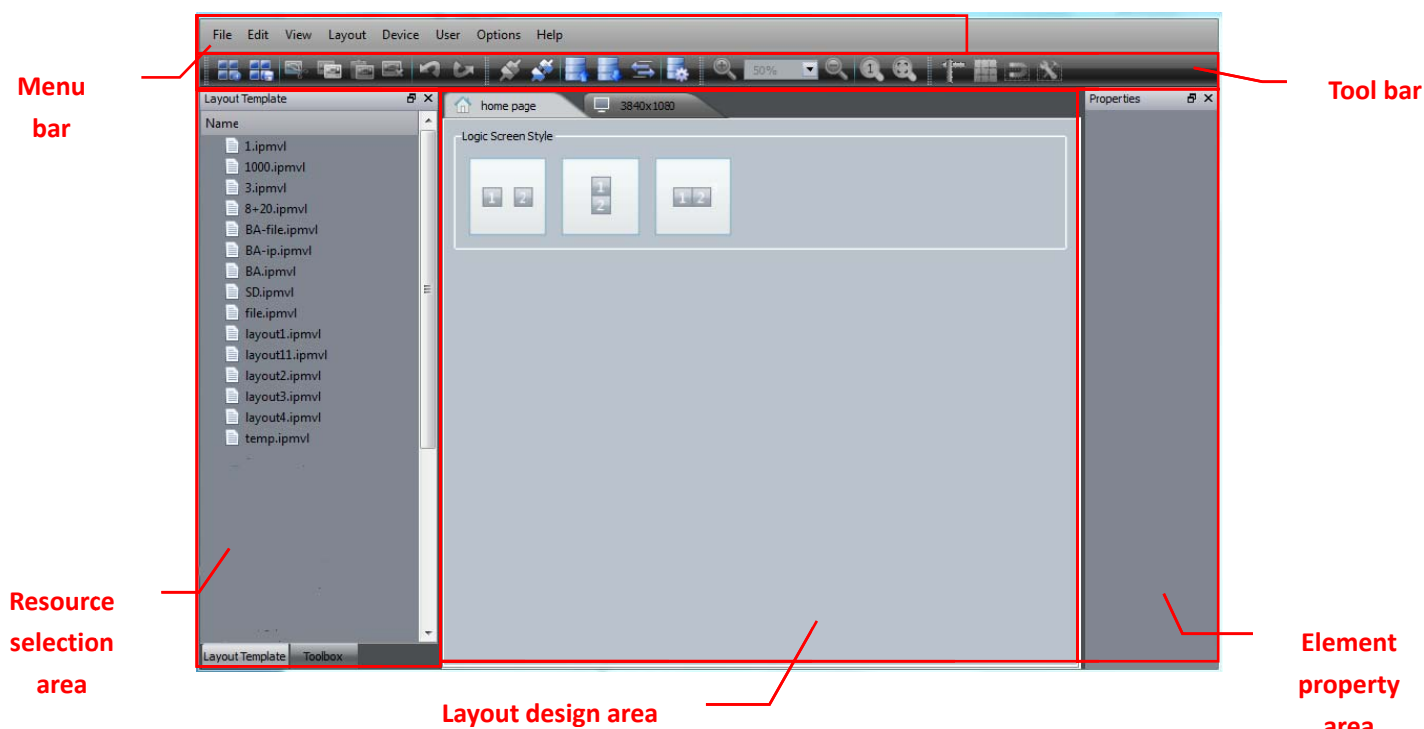


: Clear the record: if click this button, all IP addresses and passwords saved in system will be deleted.

After input IP and password, click "Login" button, system will prompt "Login successful!" if they are valid. Software will run normal after login, users can modify default IP address and password.

If input IP is invalid, the system will prompt "Connect server failed!". If input password is invalid, the system will prompt "Login failed!"

There are 6 parts in IPCM management software user interface: upside, from highest to lower are, title bar, menu bar, tool bar; downside, from left to right are, resource selection area (include layout template, tool box), layout design area, element properties area.



Next introduce details in order.

## 2 Title Bar

Title bar shows the currently editing layout name, as following picture. Current layout is layout1.ipmvl.



When new a layout template, the system will give name to new template in the order of layout1.ipmvl, layout2.ipmvl, layout3.ipmvl... ..

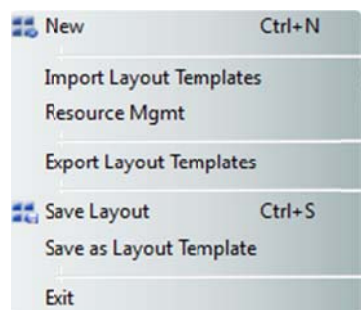
## 3 Menu bar

Menu bar includes "File", "Edit", "View", "Layout", "Device", "User", "Options" and "Help".




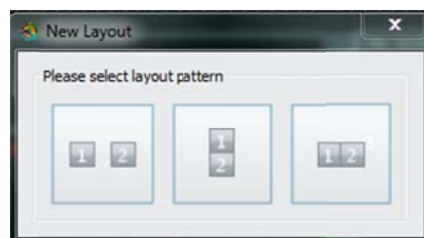
## 3.1 【File】

There are following options in "File" menu:

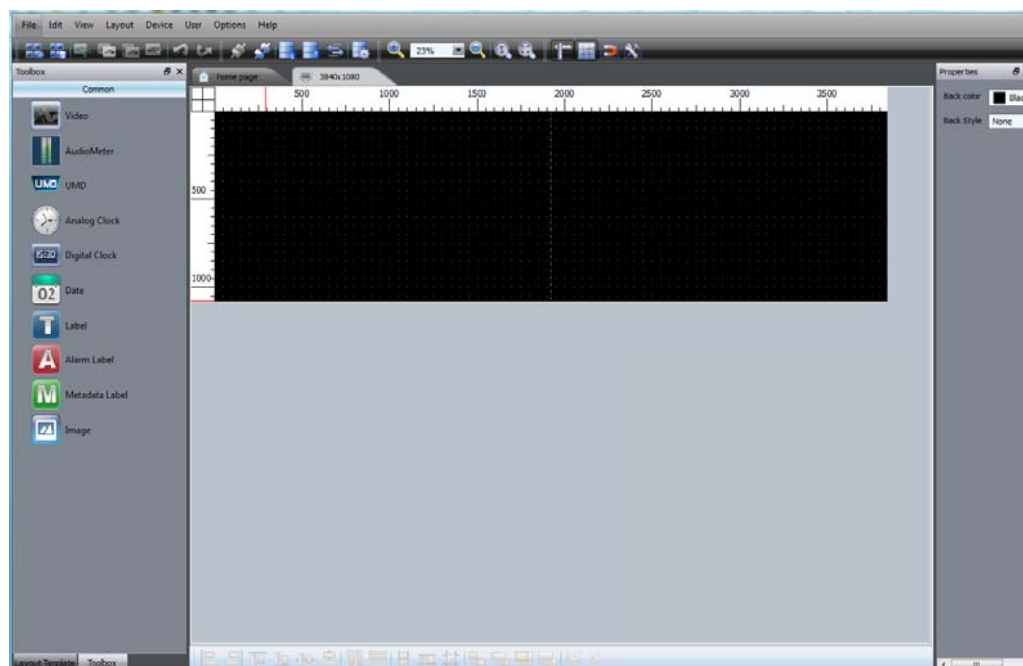


### 3.1.1 "New" option

1. Select "New" option, the hot key is Ctrl+N, "New" option is corresponding to  in tool bar, **【New Layout】** window is prompted. There are 3 kinds of screen combinations of 2 screens in default, 2 screens can be located separately, or combined vertically or horizontally.

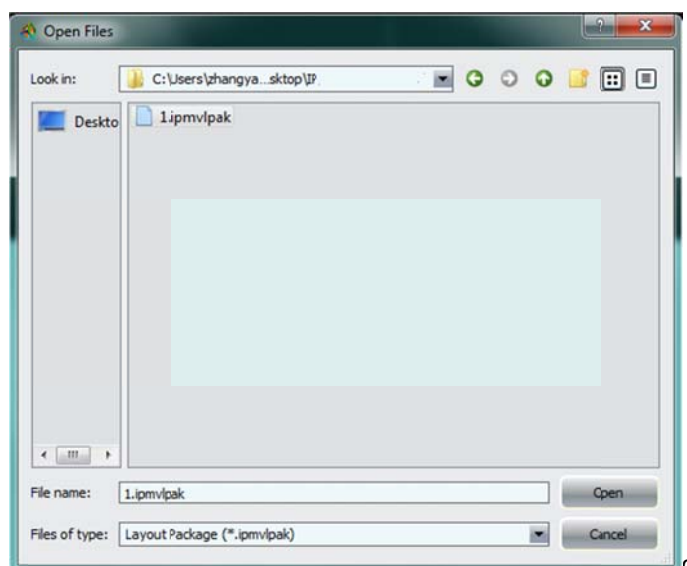


2. Select a screen combination, corresponding number of tabs will be shown in right side window according to the number of logical screen. For example, select first one, two new tabs **【1920x1080】**, **【1920x1080】** will be created, and also present the resolution of logical screen.
3. Select a tab, users can edit layout in lower black area, fit size is shown below.



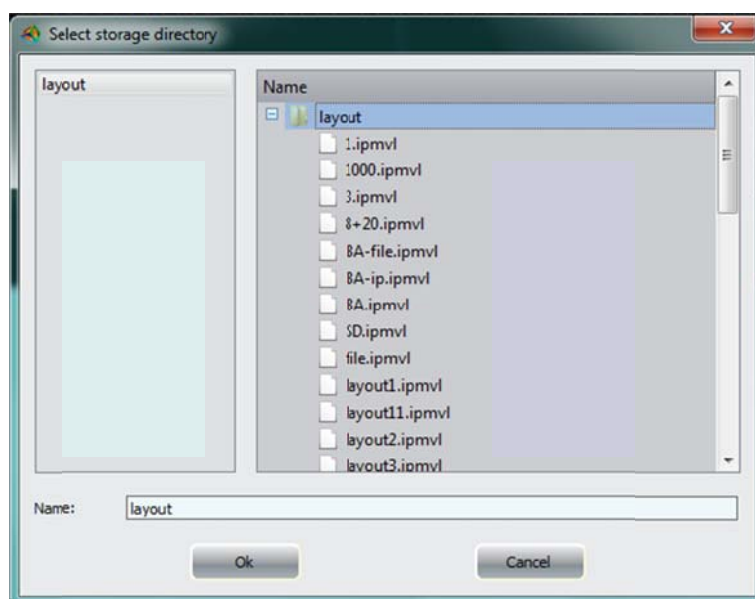
### 3.1.2 "Import Layout Templates" Option

1. Select "Import Layout" option to pop-up 【Open Files】 window. choose the layout template want to import (.ipmvpak), the layout templates can come from any location, for example, can fixedly place external layout template in D:\.



2. Click Open button to pop-up Select storage directory window, save the template in layout folder. Layout folder is default folder of IPCM management software used to

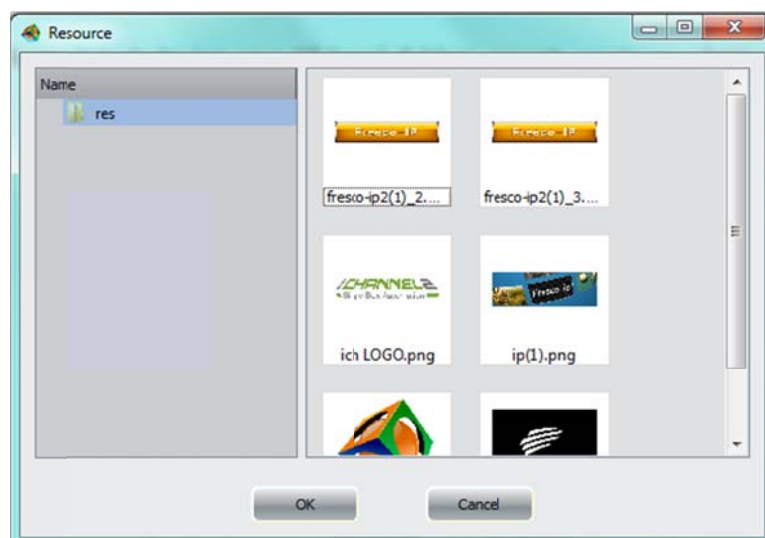
save layout templates.



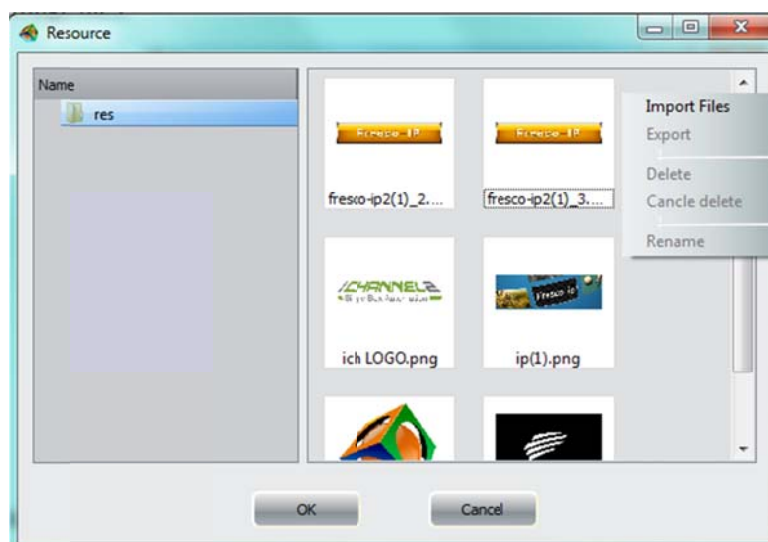
3. Click "Ok" button to complete import.

### 3.1.3 "Resource Mgmt" Option

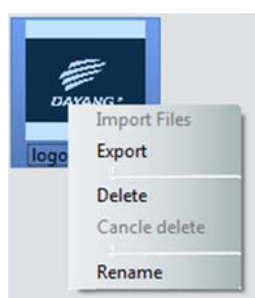
1. "Resource Mgmt" option is in charge of all image resources management, can perform import, export, delete, rename and other operations for files and folders.
2. Select "Resource Mgmt" option to pop-up Resource window. In left side of window is res folder, and corresponding image list in right side of window.
3. Right-click res folder to pop-up an option list, can import files (currently supported formats include: jpg, png, tif, bmp), folders, export, create new folder.



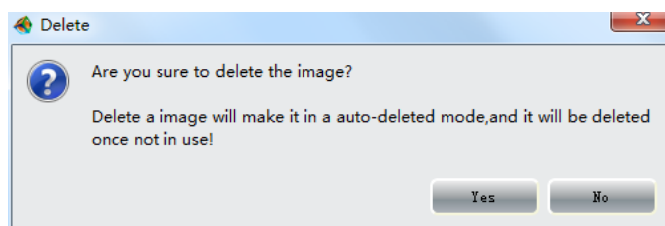
4. Right-click in blank space in right side image list to pop-up option list, can import image files.



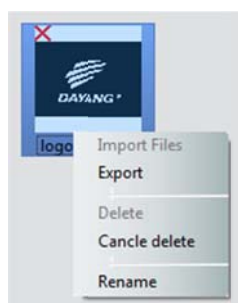
5. Right-click existing image, can perform export, delete and rename this image.



6. The delete confirmation window will be prompted when delete an image to confirm delete, if current image are not in use, it can be delete, otherwise delete fail.

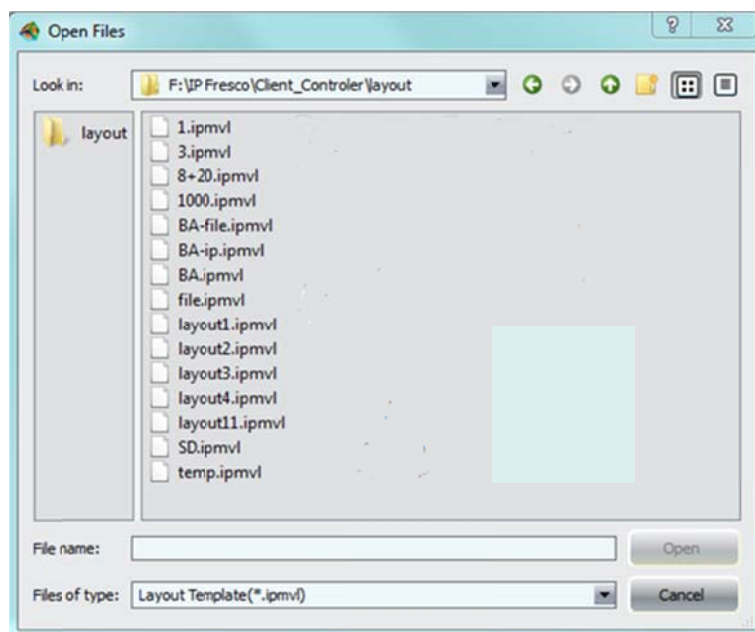


7. In case delete is failed, a red cross will emerge on image, in this time, right-click this image and choose Cancel delete option to cancel delete, this image will recover to normal.



### 3.1.4 "Export Layout Templates" Option

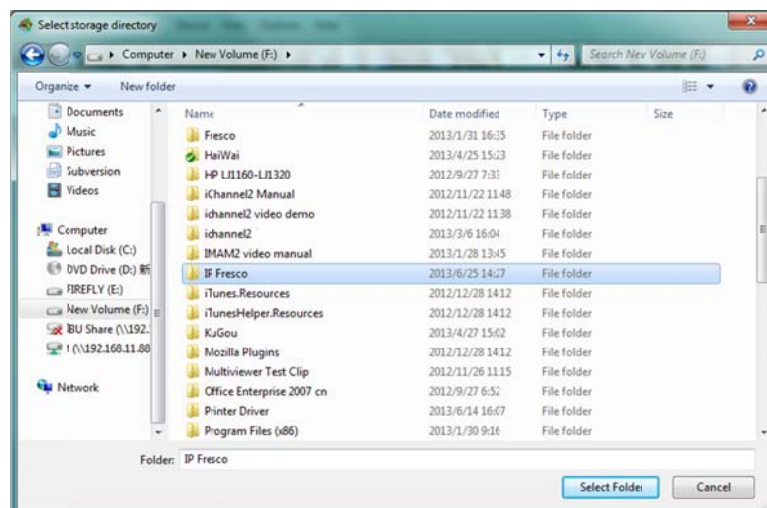
1. Choose "Export Layout Templates " option to pop-up 【Open Files】 window, choose layout template need to export.



2. Click Open to pop-up 【Select storage directory】 window, choose a location will be




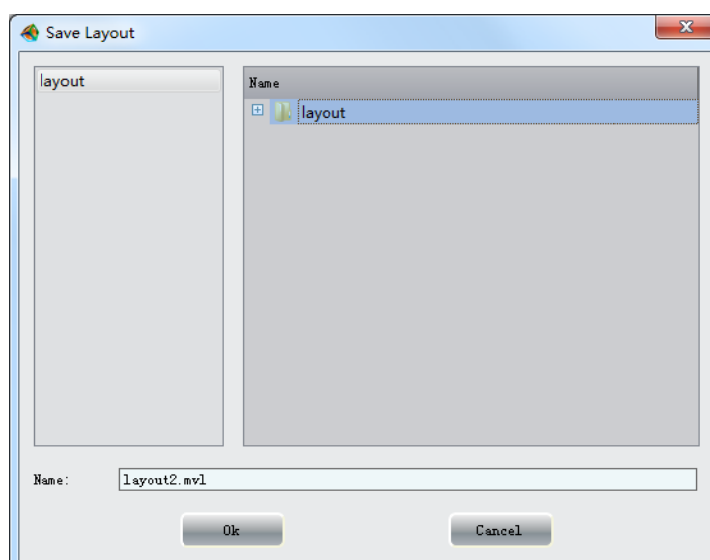
used for saving exported template location, exported templates can be saved in any location, for example, can fixedly place exported layout template in D:\XX. Click "Choose folder" button to complete export.



### 3.1.5 "Save Layout" Option

Choose "Save Layout" Option to pop-up 【Save Layout】 window, the hot key is Ctrl+S,

" Save Layout " option is corresponding to  in tool bar. Input layout name, system will save it in the layout folder.



### 3.1.6 "Save as Layout Template" Option

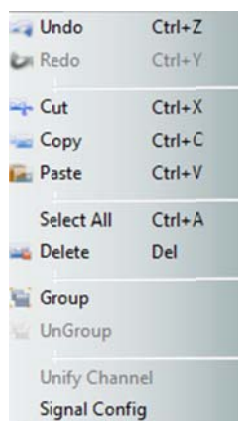
For those layout templates have already saved, can modify them and save them in other location, and can save them to other layout templates. choose a location in **【Save Layout】** window.

### 3.1.7 "Exit" Option


Choose "Exit" option to close IPCM management software.

## 3.2 **【Edit】**

The options in Edit menu are mainly used for performing layout design. Edit menu includes following options:




#### 3.2.1 "Undo" Option

Choose "Undo" (Ctrl+Z) option, , to revoke previous action.


#### 3.2.2 "Redo" Option

Choose "Redo" (Ctrl+Y) option, , to recover previous action.


### 3.2.3 "Cut" Option

Choose "Cut" (Ctrl+X) option, , to cut clicked tools.

### 3.2.4 "Copy" Option

Choose "Copy" (Ctrl+C) option, , to copy clicked tools.


### 3.2.5 "Paste" Option

Choose " Paste " (Ctrl+V) option, , to paste tools.

### 3.2.6 "Select All" Option


Choose "Select All" (Ctrl+A) option to select all objects in current layout .

### 3.2.7 "Delete " Option

Choose " Delete " (Del)  option to delete choosed tools.

### 3.2.8 "Group" Option

1. All tools (elements) in layout design area are originally independent, sometimes users need to perform same operation for multiple tools, with the intention of convenience and accuracy, multiple tools need to be grouped.

2. Choose "Group" option  to group independent tools together, can operate integrally.

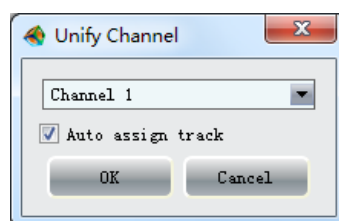
### 3.2.9 "UnGroup" Option

When need to independently operate one tool in a grouped tools, choose "UnGroup"

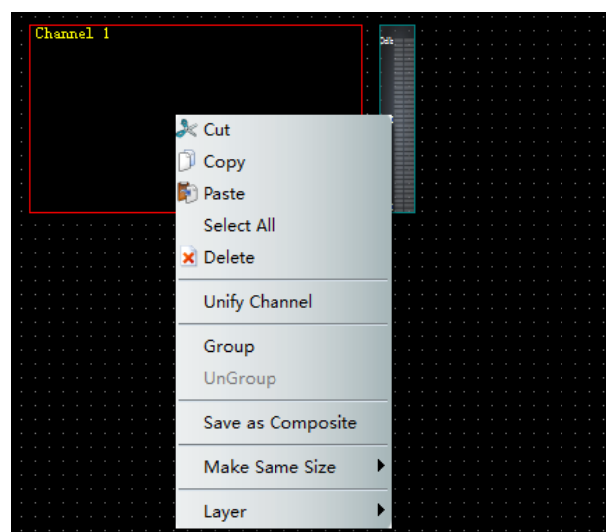
option .

### 3.2.10 "Unify Channel" Option

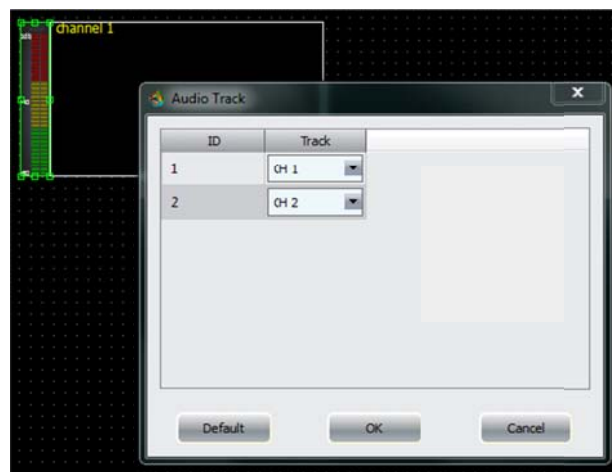
1. Choose "Unify Channel" option to pop-up【Unify Channel】window, can unify selected tools into same channel.



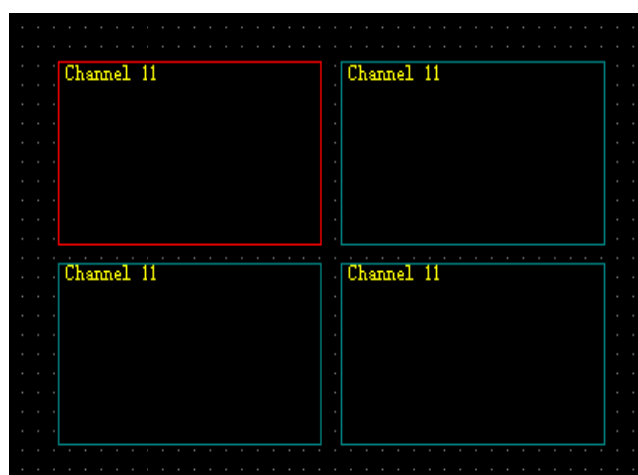
2. Users can also right-click on a group of selected tools, choose Unify Channel option in list to pop-up 【Unify Channel】 window.



3. As above picture, video and audio meter are unified to Channel1, if Auto assign track option is checked, four volume meters of audio meter from left to right orderly are CH1, CH2, CH3, CH4...

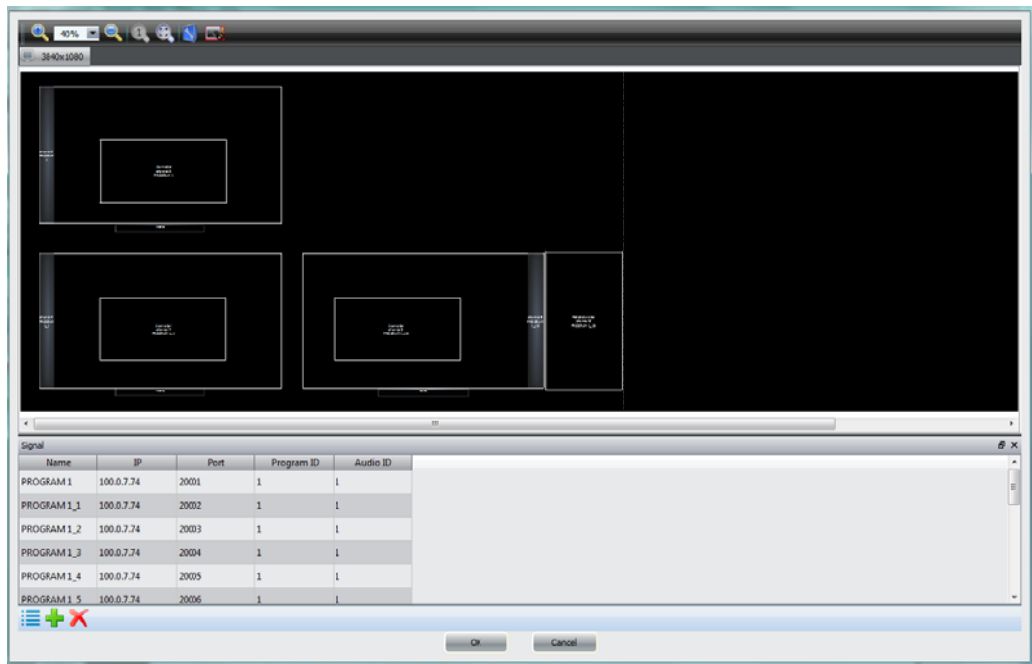





4. Can also unify multiple videos to same Channel.



### 3.2.11 "Signal Config" Option

Choose "Signal Config" Option to pop-up following window:



Press Default button  , the number of signal sources will be 30 with default IP and port number. Also, can choose New signal source button  and delete signal source button  to add/delete signal sources.

Signal				
Name	IP	Port	Program ID	Audio ID
SigSource 1	192.168.11.61	20001	1	1
SigSource 2	192.168.11.61	20002	1	1
SigSource 3	192.168.11.61	20003	1	1
SigSource 4	192.168.11.61	20004	1	1
SigSource 5	192.168.11.61	20005	1	1
SigSource 6	192.168.11.61	20006	1	1

Signal Config table includes Name, IP, Port, Program ID, Audio ID

『Name』: show the name of signal source, can be modified.

『IP』: show IP address of signal source (target IP).

『Port』: set port number of each signal source.

『Program ID』: if IP stream is multiple programs transport stream (MPTS), you can set Program ID (stream number) for each signal source to choose which program stream in MPTS this signal source come from.

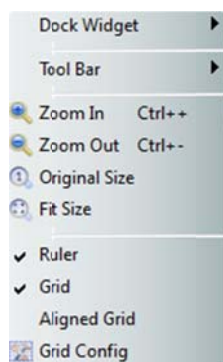
『Audio ID』: if there are multiple audio tracks in current program stream, you can set Audio ID for each signal source to choose which audio track in current program stream

this signal source come from.

After signal allocation, choose one of signals, hold the left mouse button, drag to one video window you want to assign, then drop it. you can perform signal config for video windows one by one. Click OK button to complete.

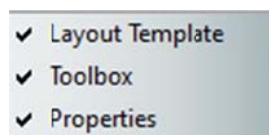
### 3.3 【View】

【View】 Menu includes following options:

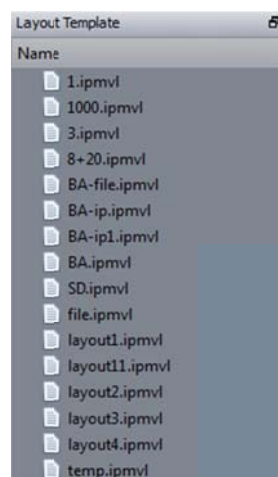


#### 3.3.1 "Dock Widget" Option

Expand "Dock Widget" option, includes Layout Template, Screen Template, Toolbox, Properties and Component List. After check some options, corresponding dock widgets will be shown in main software window.



1) Layout Template

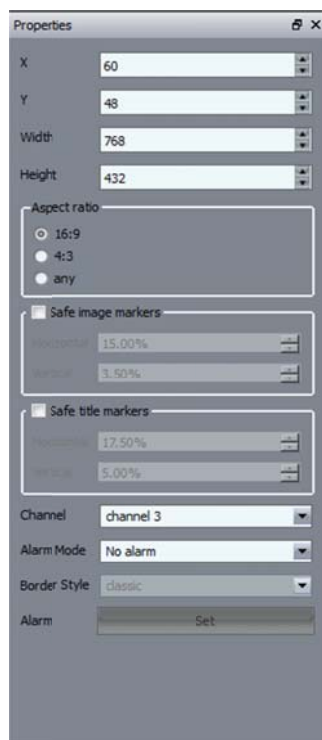


## 2) Toolbox



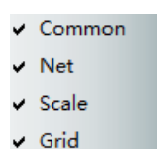
## 3) Properties





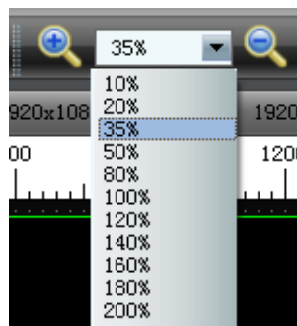
### 3.3.2 "Toolbar" Option



"Toolbar" option includes Common, Net, Scale and Grid. After check some options, these options will be shown on the interface.



### 3.3.3 "Zoom In", "Zoom Out" Option

1. Choose "Zoom In"(Ctrl++), "Zoom Out"(Ctrl+-) option, can zoom in or zoom out editing area by the order of scales




2. For example, current display is 35%, click  to zoom in to 50%, while click  to zoom out to 20%.
3. When need to perform fine adjustment for elements location, can use direction key "Up, Down, Left, Right" of keyboard to move selected elements. In different zoom scale, the distances of each move are relatively different. Details are depicted as following:
  - 1) When zoom scale is 10%~35%, 10 pixels for one move.
  - 2) When zoom scale is 50%~80%, 4 pixels for one move.
  - 3) When zoom scale is 100% or above, 2 pixels for one move.
4. In addition, left-click editing area, and use "Ctrl + Mouse Wheel" to quickly adjust zoom scale for editing area.


### 3.3.4 "Original Size" Option

Choose "Original Size" Option, , to adjust layout to original size. i.e. 100%.


### 3.3.5 "Fit Size" Option

Choose "Fit Size" option  to adjust current layout size to a fit size so that all layout area can be shown in layout editing window, convenient for display for overall effect of layout.


### 3.3.6 "Ruler" Option

Choose "Ruler" option, , the rulers will be presented on the left side and upside of layout design area as helping role to assist users to estimate rough position of elements.


### 3.3.7 "Grid" Option

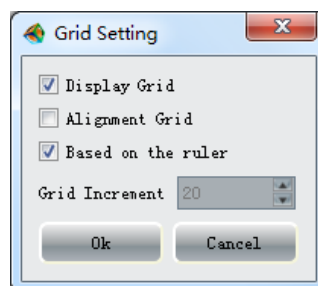
Choose "Grid" option, , the background of layout design area will be filled by grid, convenient for accurate positioning.

### 3.3.8 "Alignment Grid" Option


Choose "Alignment Grid" option, , or click Alignment Grid icon in toolbar. if this option is not chosen, the elements will be placed strictly according to the position you placed, if this option is chosen, the software will automatically adjust the positions of elements to grid alignment.


### 3.3.9 "Grid Setting" Option


1. Choose "Grid Setting" option, , to pop-up【Grid Setting】window, if Based on the ruler is checked, grid increment is set to 20 by default, if not checked, grid increment can be set by custom.



2. In 【Grid Setting】 :

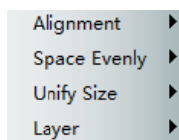
『Display Grid』: corresponding to "Grid" option  in toolbar.

『Alignment Grid』: corresponding to "Alignment Grid" option  in toolbar.

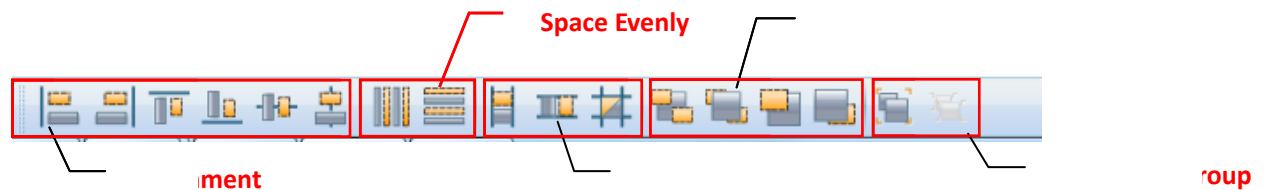
- 『Based on the ruler』: corresponding to "Based on the ruler" option  in toolbar. if Based on the ruler is checked, grid increment is fixed according to minimum increment of grid in current zoom scale, if not checked, grid increment can be set by custom.

## 3.4 【Layout】

In IPCM management software, includes following options:



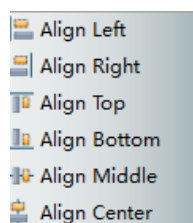
There are shortcut icons of layout menu under the current layout design area.



For Alignment, Space Evenly and Unify Size, the border of tools formerly clicked is present blue, and the border of last clicked tool present red as a reference. blue tools will be adjusted based on red tool. i.e. last clicked is fixed, formerly clicked refer to last clicked.

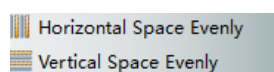
### 3.4.1 "Alignment" Option

Expand "Alignment" option, includes following sub-options:



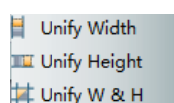
### 3.4.2 "Space Evenly" Option

"Space Evenly" option includes following sub-options:



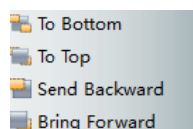
### 3.4.3 "Unify Size" Option

"Unify Size" option includes following sub-options:

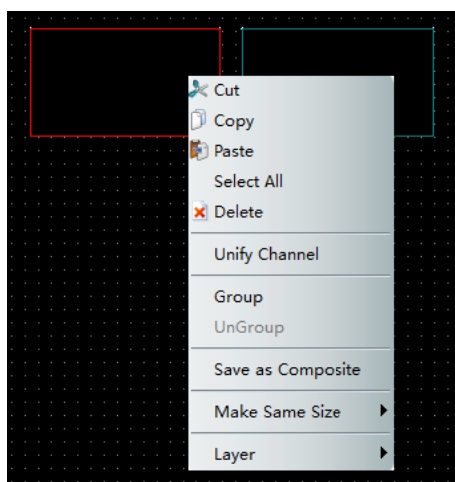


### 3.4.4 "Layer" Option

"Layer" option includes following sub-options:

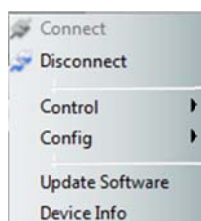


In addition, users can also adjust layer and unify size by use of right-click menu after choose an element or a group of elements.




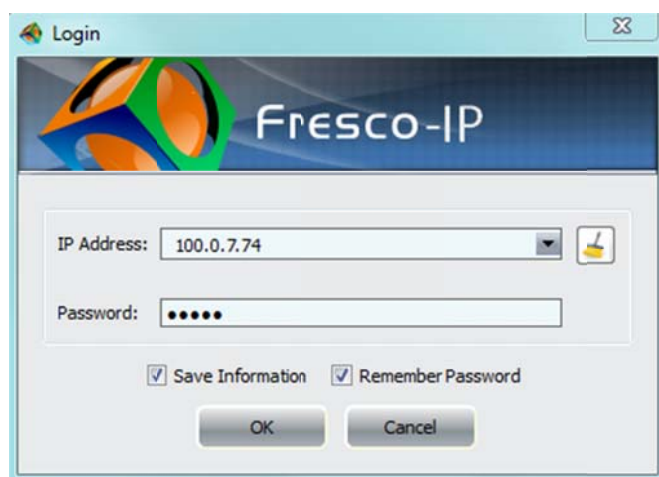
## 3.5 【Device】

Expand 【Device】 menu, following options are included:




### 3.5.1 "Connect" Option

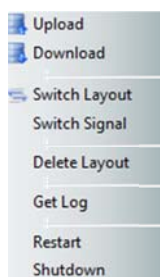
"Connect" option is corresponding to  in the toolbar, press it to pop-up Login window, input IP address and password (IP address will be displayed in right bottom corner of Fresco start-up interface, the default password is admin). Login success will be prompted if password is valid, and control terminal is able to interact with device terminal, such as upload layout.



### 3.5.2 "Disconnect" Option

Choose "Disconnect" option, this option is corresponding to  in the toolbar, software cannot communicate with device option.

### 3.5.3 "Control" Option

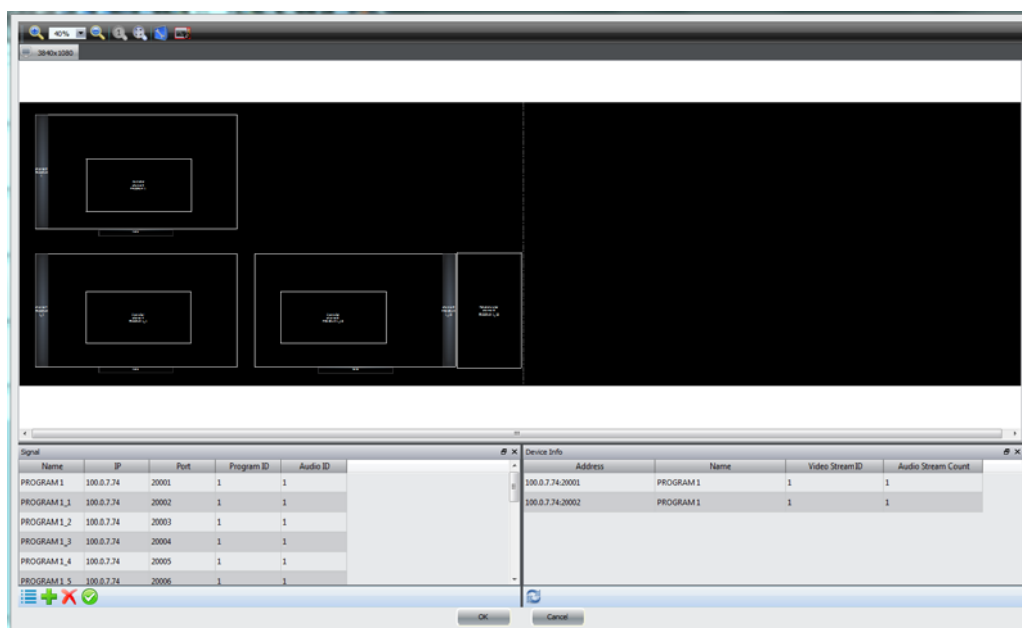


#### 3.5.3.1 "Upload"


1. Choose "Upload" option to pop-up below window, this option is corresponding to



in the toolbar, the list of layout includes layouts in current device terminal in order of 1~10.



Signal sources can be *online* allocated here (3.2.11 can be seen as *offline* signal allocation), "Device info" tab shows recognized incoming IP streams with IP and Program ID, you can use them as signal sources directly, and you can open this window as long as the control terminal has been successfully connected with Fresco chassis.

Click Check button  to check availability of all signal sources, different status of signal source will present different colors, like below:

Signal	Name	IP	Port	Program ID	Audio ID
	PROGRAM 1	100.0.7.74	00001	1	1
	PROGRAM 1_1	100.0.7.74	00002	1	1
	PROGRAM 1_2	100.0.7.74	00003	1	1
	PROGRAM 1_3	100.0.7.74	00004	1	1
	PROGRAM 1_4	100.0.7.74	00005	1	1
	PROGRAM 1_5	100.0.7.74	00006	1	1
	PROGRAM 1_6	100.0.7.74	00007	1	1
	PROGRAM 1_7	100.0.7.74	00008	1	1
	PROGRAM 1_8	100.0.7.74	00009	1	1
	PROGRAM 1_9	100.0.7.74	00010	1	1
	PROGRAM 1_10	100.0.7.74	00011	1	1
	PROGRAM 1_11	100.0.7.74	00012	1	1
	PROGRAM 1_12	100.0.7.74	00013	1	1
	PROGRAM 1_13	100.0.7.74	00014	1	1

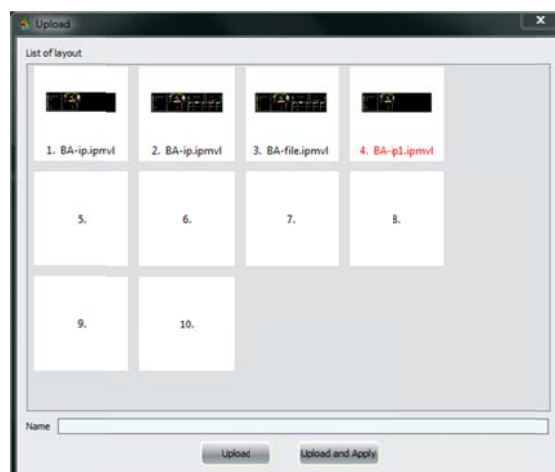
Gray (no color change): signal source is available, system can detect its IP stream.

Yellow: warning, information in yellow is not match with original information of IP stream, as picture above, "PROGRAM 1\_1" and "PROGRAM 1\_3" are not match with this information embedded in original IP stream. However, this kind of signal source can still be used.



Red: signal source is not available. system cannot detect its IP stream. That indicates this kind of signal source cannot be used.

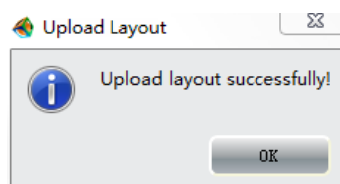
1. Drag-drop a signal source from bottom right "Device Info" window to bottom left "Signal" window, then drag-drop signal source to upper video windows. After signal allocation, click OK, the Upload window will be shown:



2. The device terminal can save up to 10 layouts. The red one indicates it is currently being used. When upload layout, can replace existing layouts with the layout which want to upload, for example, replace 2.BA-ip.ipmvl in current list.
3. In this time, the Question window is prompted to ask users confirm cover "2.BA-ip.ipmvl". If choose Yes, the old layout will be replaced, choose No to cancel upload.




4. Users can also choose one blank of 5~10, then input name of layout, click "Upload". "Upload layout successfully!" is prompted after successful upload, this layout is uploaded from control terminal to device terminal.

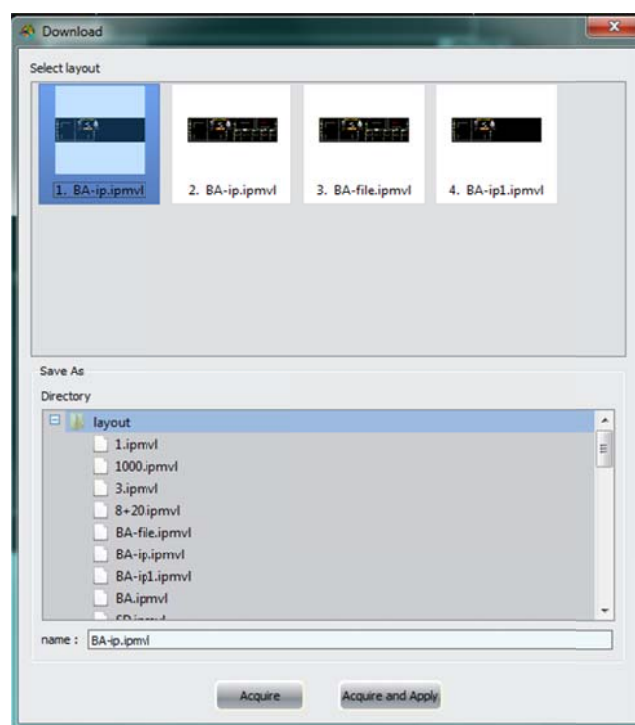


5. If click "Upload and apply", uploaded layout will be displayed on the screen

immediately.

### 3.5.3.2 "Download" Option

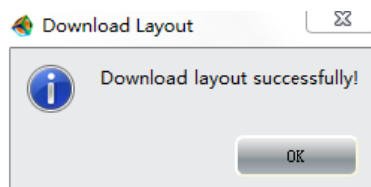
1. Choose "Download Layout" option to pop-up "Download layout" window, this option is corresponding to  in the toolbar, can download layouts from device terminal to control terminal.




2. The layout list in the server gives all layouts saved in device terminal, users is able to choose a layout which want to download in drop-down list. For example, select "1.ipmv1", the name blank at the bottom will inherit this layout name automatically, users can also rename it.
3. Click "Acquire" button, if there is no same-name layout in layout folder, then prompt "Download layout successfully", and "1.ipmv1" will be saved in layout folder.
4. If there is same-name layout in the folder, "Download Layout" is prompted to point out relative information, can confirm replace.

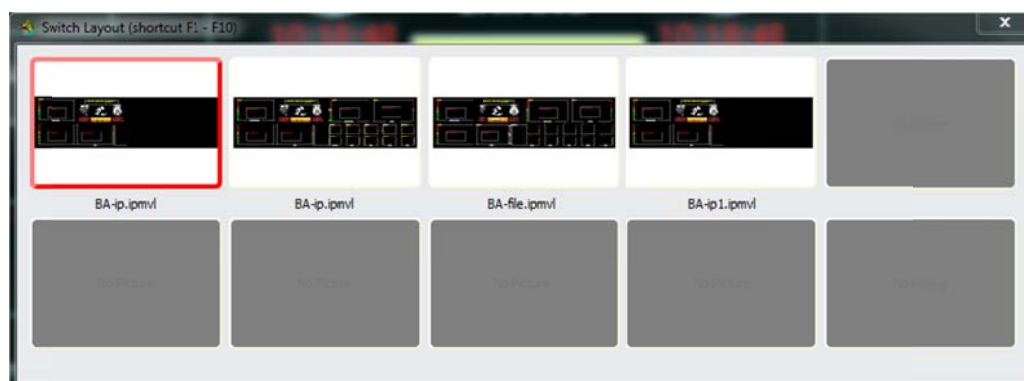


- Click "Yes" to replace original layout; click "No" to cancel download.

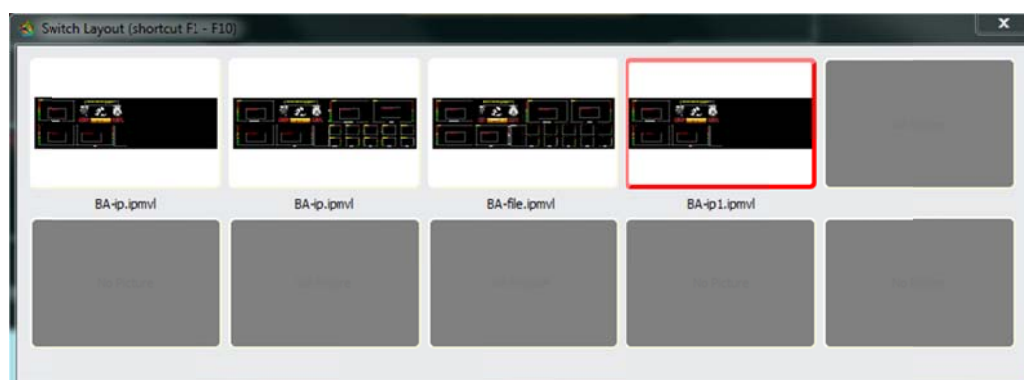


### 3.5.3.3 "Switch Layout" Option

- Choose "Switch Layout" option to pop-up 【Switch layout】 window, this option is corresponding to  in the toolbar. List of layout show all layouts currently saved in server, and the red layout means this layout is currently in use.

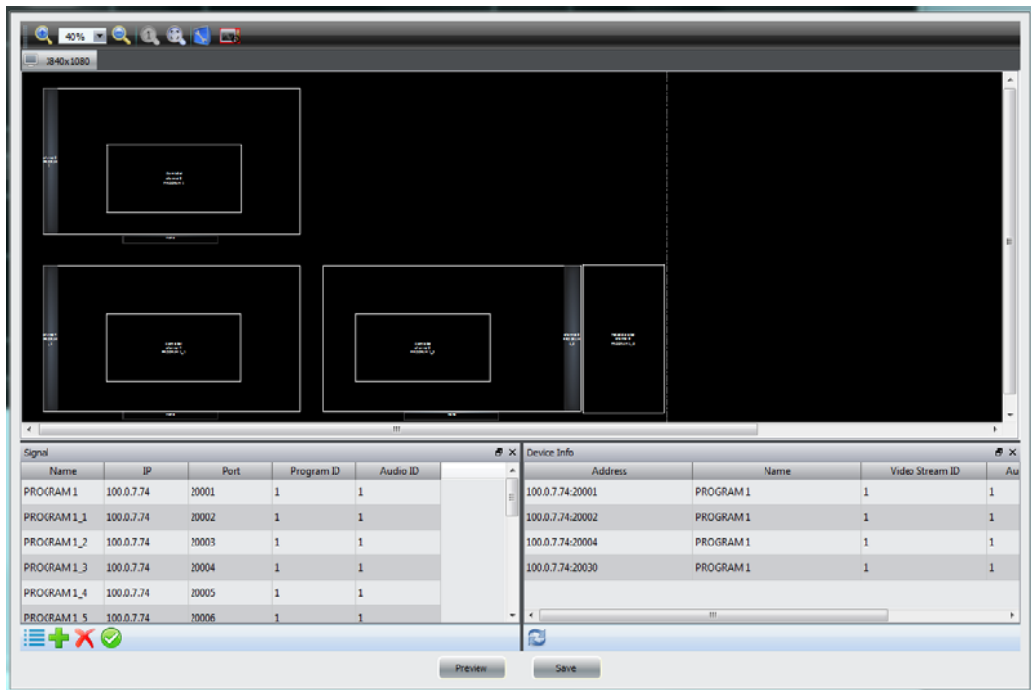


- Choose a layout which want to switch, for example, choose the forth one



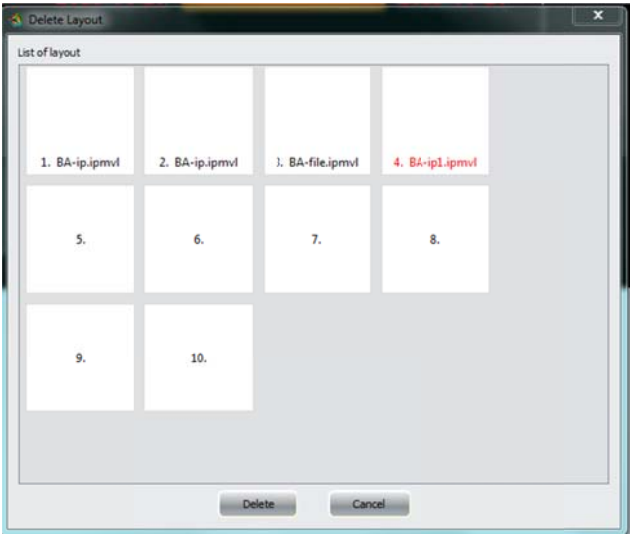
Display content on the screen will be switched immediately.

3.5.3.4 "Switch Signal" Option



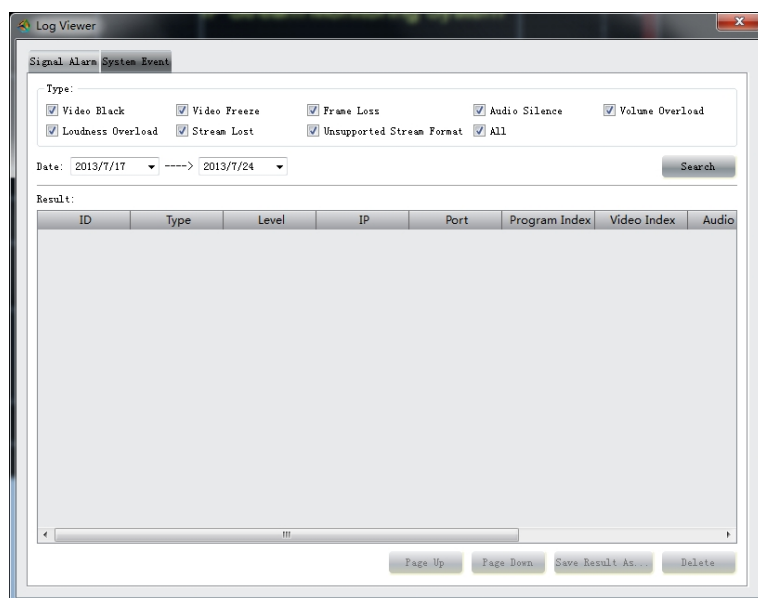
By use of this function, you can change signal source for currently using layout on the screen and directly preview effect but without layout uploading process. you can save your config if display effect is correct.

3.5.3.5 "Delete Layout" Option

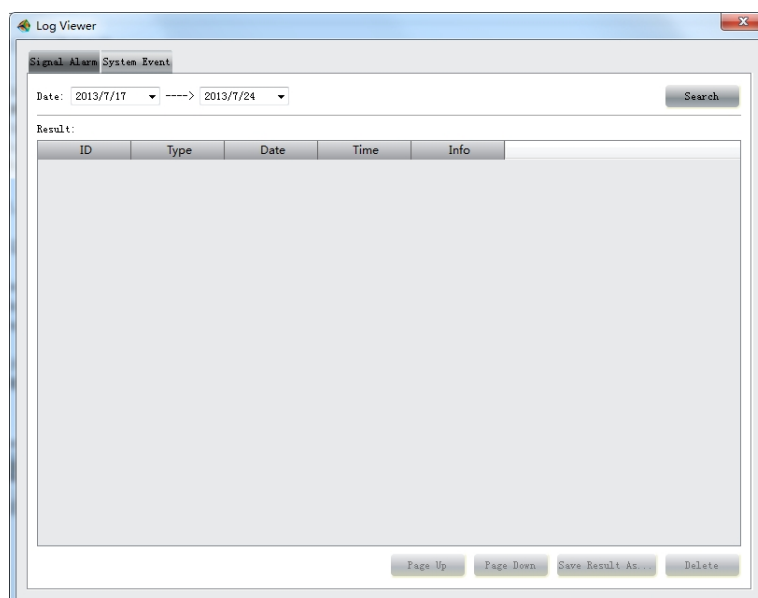


Layouts saved in Fresco chassis can be deleted here.

### 3.5.3.6 "Get Log" Option



Choose alarm type you want to see, then set a time duration from date option, click search. all records related to selected alarm type will be displayed in result window.



Set a time duration from date option, click search. all system events will be displayed in result window.

### 3.5.3.7 "Restart" Option

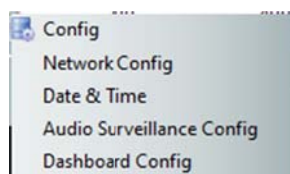
To restart Fresco server, you need to re-connect Fresco server via control software.

### 3.5.3.8 "Shutdown" Option




To shutdown Fresco server.

## 3.5.4 "Config" Option




### 3.5.4.1 "Config"

Choose "Config" option to pop-up **【Device Config】** window, corresponding to  in the toolbar, include three parts of config: Common, Video Config , Audio Config and Port Config.

1. The Common tab is shown as following:

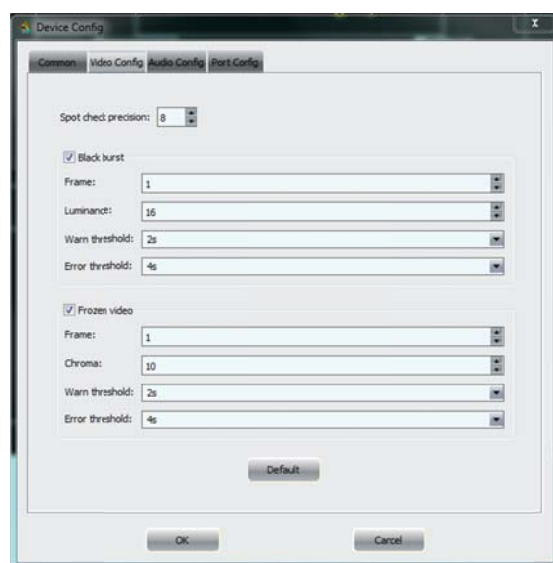


Choose "Config" option to pop-up **【Device Config】** window, corresponding to  in the toolbar, include three parts of config: Common, Video Config and Audio Config.

『Output Video Standard』: There are two output video standards: 1080/50p and 1080/59.94p. Please choose according to local condition. If screen supports 50, 1080/50p should be chosen.

『Language』: Select software language from Chinese and English.

2. The Video Config tab is shown as following:



The meanings of parameters are:

『Spot check precision』: This parameter affects probing sensibility of black field and video frozen. The lower level, the higher probing sensibility.

If "Black field" is checked, activate black field detection.

『Frame』: Black frame threshold, considered as black field when the number of consecutive black frame more than or equal to frame threshold.

『Luminance』: Luminance threshold, 16 is considered as experience value.

『Warn threshold』: When probe black field of video signal, if black field duration over this threshold, then Fresco-IP will automatically generate warn information

『Error threshold』: When probe black field of video signal, if black field duration over this threshold, then Fresco-IP will automatically generate error information.

**『Frame』 and 『Luminance』 are professional settings which not recommended to change.**

If "Frozen video" is checked, activate frozen video detection.

『Frame』: Still frame threshold, considered as video freeze when the number of consecutive still frame more than or equal to frame threshold.

『Chroma』: A threshold of pixel difference between two adjacent frames.



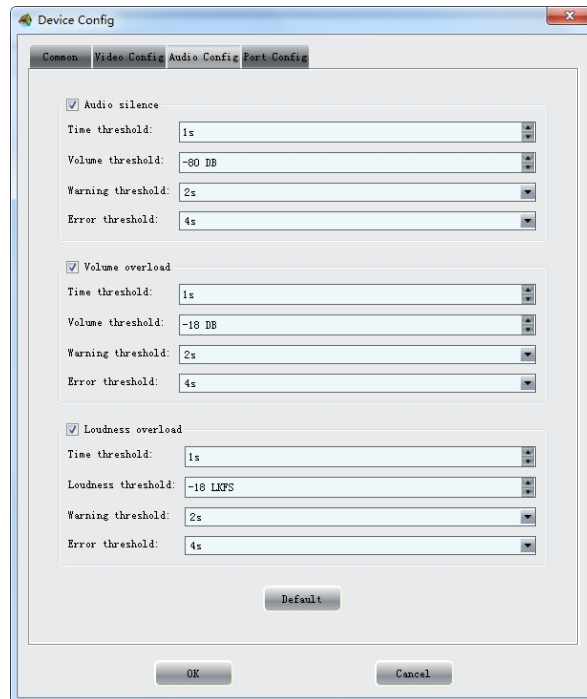
『Warn threshold』: When probe frozen video of video signal, if frozen video duration over this threshold, then Fresco-IP will automatically generate warn information

『Error threshold』: When probe frozen video of video signal, if frozen video duration over this threshold, then Fresco-IP will automatically generate error information.

『Frame』 and 『Chroma』 are professional settings which not recommended to change.

In the view of order of severity, error outclass warn, so error threshold should be higher than warn threshold. if warn can be tolerated, error need to be interfered manually.

3. The Audio Config tab is shown as following:



The meanings of parameters are:

If "Audio silence" is checked, activate audio silence detection.

『Time threshold』: Silence time threshold, considered as mute when the duration which volume level is less than volume threshold is more than or equal to this time threshold.

『Volume threshold』: Set minimum value of audio.

『Warn threshold』: When probe silence, if silence duration over this threshold, then

Fresco-IP will automatically generate warn information.

『Error threshold』: When probe silence, if silence duration over this threshold, then Fresco-IP will automatically generate error information.

**『Time』 threshold is professional setting which not recommended to change.**

If "Volume overload" is checked, activate volume overload detection.

『Time threshold』: Volume overload time threshold, considered as volume overload when the duration which volume level is more than volume threshold is more than or equal to this time threshold.

『Volume threshold』: Set maximum value of audio.

『Warn threshold』: When probe volume overload, if volume overload duration over this threshold, then Fresco-IP will automatically generate warn information.

『Error threshold』: When probe volume overload, if volume overload duration over this threshold, then Fresco-IP will automatically generate error information.

**『Time』 threshold is professional setting which not recommended to change.**

If "Loudness Overload" is checked, activate loudness overload detection.

『Time threshold』: Loudness Overload time threshold, considered as loudness overload when the duration of loudness overload more than or equal to this time threshold.

『Loudness threshold』: Set maximum value of loudness, loudness is more than this value is known as loudness overload.

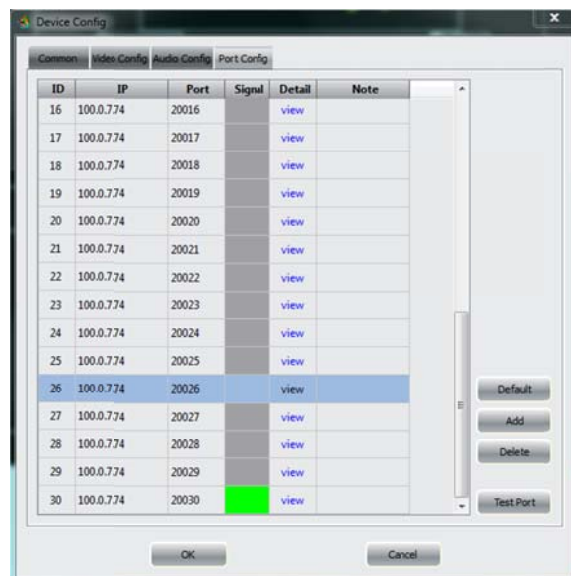
『Warn threshold』: When probe loudness overload, if silence loudness overload duration over this threshold, then Fresco-IP will automatically generate warn information.

『Error threshold』: When probe loudness overload, if loudness overload silence duration over this threshold, then Fresco-IP will automatically generate error information.

**『Time』 threshold is professional setting which not recommended to change.**

**In the view of order of severity, error outclass warn, so error threshold should be higher than warn threshold. if warn can be tolerated, error need to be interfered manually.**

4. The Port Config tab is shown as following:



This window lists all signals sources you would use in later layout design and signal allocation. signal source which plan to use should be first added into this list. In other word, the signal source those in this list can be detected by system thereby displayed in signal config window.

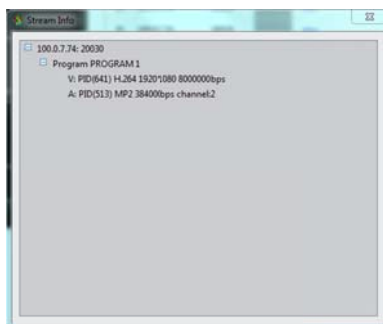
『Default』: Recover all signal sources to default setting.

『Add』: Add new signal source, including set IP and port. the signal source can be automatically detected as long as this source is added here.

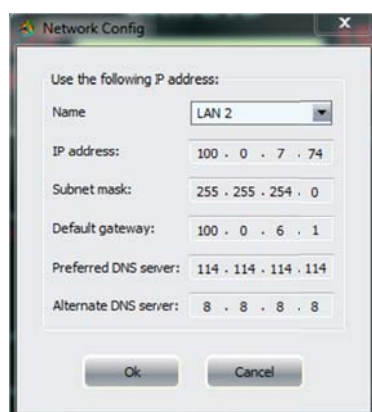
『Delete』: Delete signal source.

『Test Port』: Test status of signal sources in this list, available signal sources (the real IP stream can be detected) will present green.

Click [view](#) to see detailed information of this IP stream:



### 3.5.4.2 "Network Config"



Fresco-IP chassis has two Ethernet ports, choose one from Name, you can set or change network parameters.

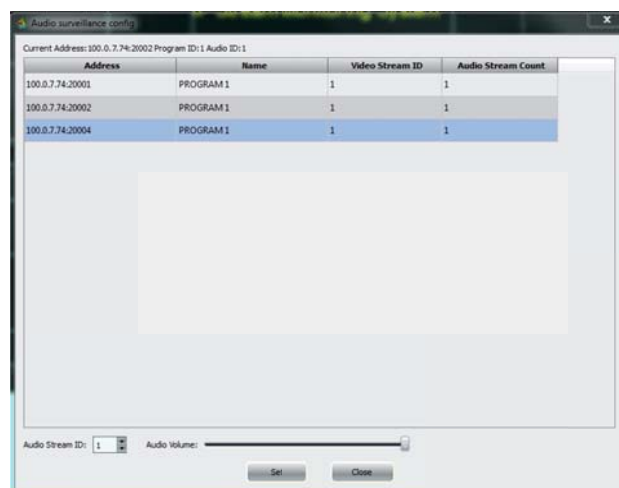
### 3.5.4.3 "Date & Time"



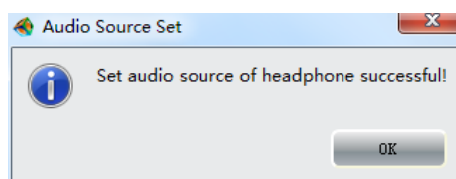
1. Choose "Date/Time" option to pop-up 【Date & Time Setup】 window, the first line is manual setting for time, click Set to save setting.
2. Next is time zone, the default is (GMT+08:00) Beijing, Chongqing, Hongkong SAR, Urumqi, you can also set DST or not.

3. If use NTP timing, please use third line setting, set IP address of server. In this way, the time of local server will be synchronized with NTP server.

#### 3.5.4.4 "Audio Surveillance Config" Option

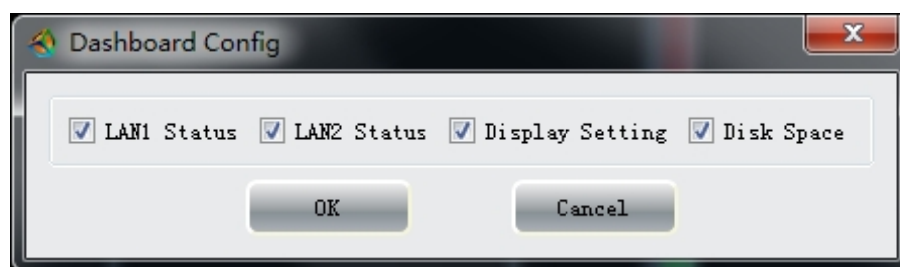


1. Choose "Audio Surveillance Config" option to pop-up **【Audio Surveillance Config】**.
2. All signal sources in this list are IP streams which Fresco-IP can detected. Choose any one signal source and set Audio Stream ID in this IP stream. Volume can be adjusted by use of volume slide bar.
3. Click Set to apply.



#### 3.5.4.5 "Dashboard Config" Option

1. Choose "Dashboard Config" option to pop-up **【Dashboard Config】**.



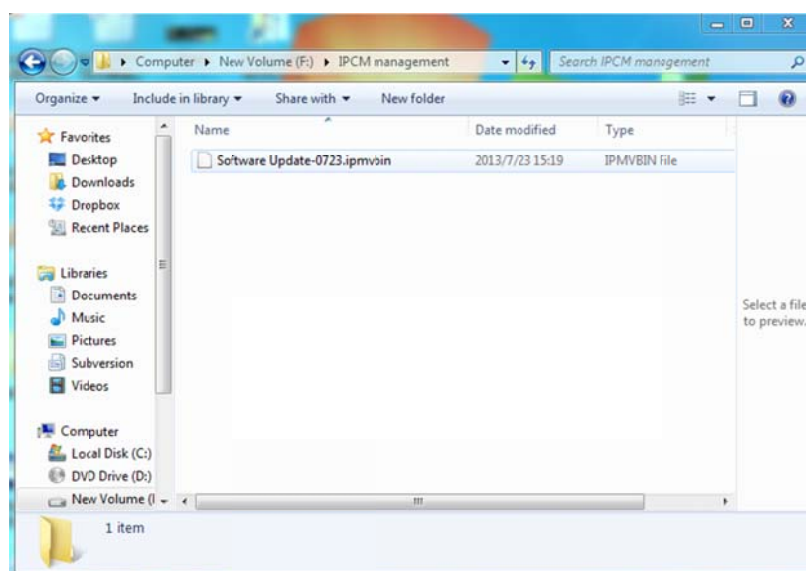
LAN1 & LAN2 Status: if network problem occurs, like network cable is unplugged, dashboard will emerge on each screens and tell users network abnormal.

Display Setting: if resolution or refresh rate of screens is not match with Fresco-IP output signal (HDMI), dashboard will report it.

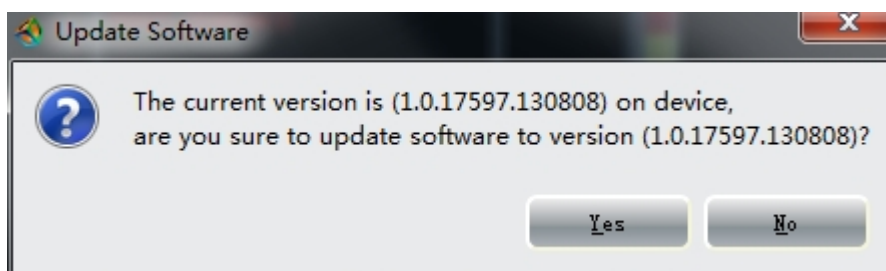
Disk Space: if disk space is full, dashboard will report it.

### 3.5.5 "Update software" Option

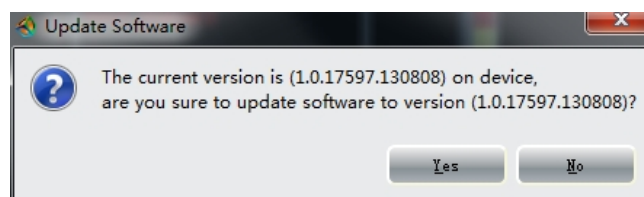
1. The updating of software need be performed with IPCM management software.  
Open IPCM management, and connect device terminal, choose 『Update Software』 option to pop-up 【Select Software】 window.



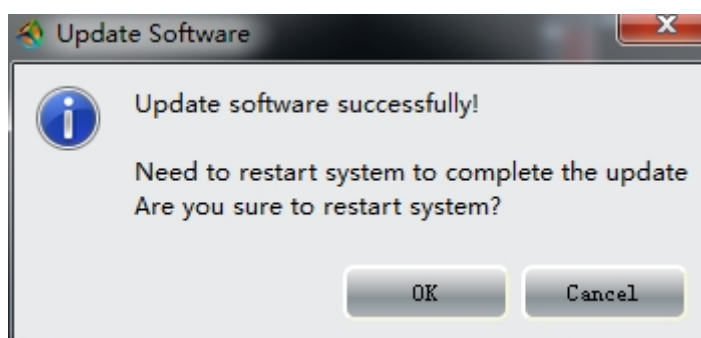
2. Choose software update package, and press "Open", following information will be shown



3. Click Yes to confirm update. Users can view updating progress in the updating process.

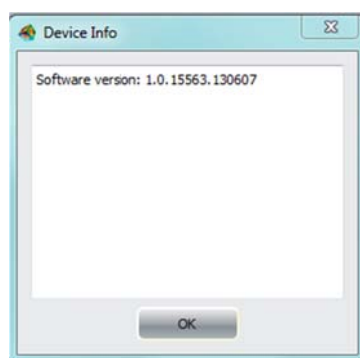


4. After successful updating, a window will prompt following information. Click OK to restart server or click Cancel restart later manually, choose 『Restart』 in the 【device】 menu, then updating is effective.



### 3.5.6 "Device Info" Option

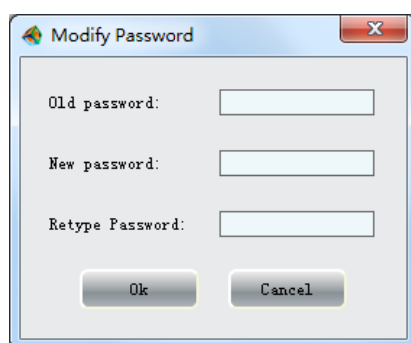
Choose " Device Info " option to see software version.



## 3.6 【User】

### 3.6.1 "Modify Password" Option

1. Choose "Modify Password" option to pop-up 【Modify Password】 window, all blanks here cannot be empty, under the condition of old password is valid and two new passwords are same, users can modify password successfully.

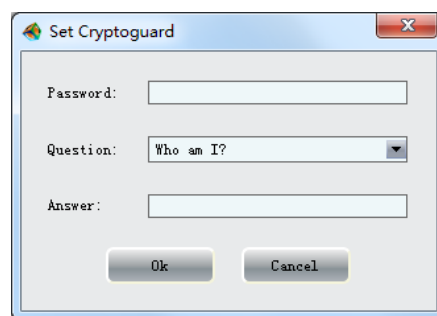


2. Users should use new password in next login.

### 3.6.2 "Set Cryptoguard" Option

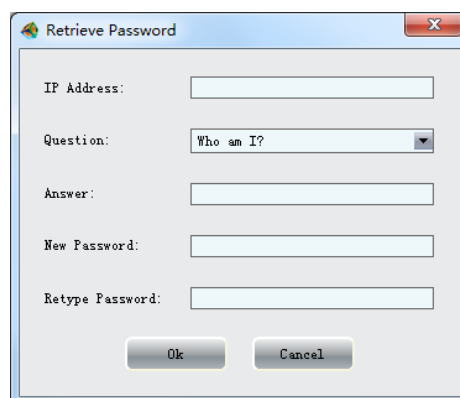
Choose " Set Cryptoguard " option to pop-up 【Set Cryptoguard】 window. Input your password, choose a question from Question drop-down list, and answer it. Cryptoguard question take a safety effect when retrieve password.



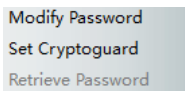


### 3.6.3 "Retrieve Password" Option

1. When users are going to login device via login window of IPCM management software, if forgot password, can use "Retrieve Password" option.

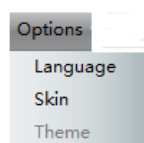


2. Under the condition of correct IP address, question and answer, input new password, and confirm it, click OK to set this new password.
3. After successful login with new password, Retrieve password presents gray and

cannot choose .

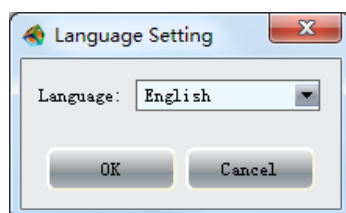
## 3.7 【Options】

Expand【Options】menu in IPCM management software, including "Language", "Skin", "Theme" options. Users can set language, Skin and theme about software interface.



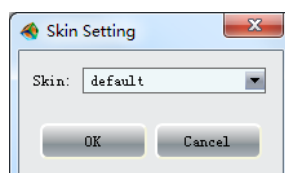
### 3.7.1 "Language" Option

Choose "Language" option to pop-up **【Language Setting】** window, there are English and Chinese (simplified).



### 3.7.2 "Skin" Option

Choose "Skin" option to pop-up **【Skin Setting】** window, currently just has default skin.



## 3.8 **【Help】**

In this menu, you can view software version and get some helpful information such as how to use software, etc.

## 4 Toolbar

The Toolbar of IPCM management software includes common tools, net tools, scale

tools and grid tools. Adopt hot keys to extract functions from menu so that improve operation efficiency. Previous chapter has already gave detailed functions for each options in the toolbar, we will not give unnecessary details.

## 4.1 Common Tools

Common tools include "New", "Save Layout", " Save Screen As", "Cut", "Copy", "Paste", "Delete", "Undo" and "Redo".



## 4.2 Net Tools

Net tools includes "Connet", "Disconnect", "Upload Layout", "Download Layout", "Channel Config", "Config".



## 4.3 Scale Tools

Scale tools include "Zoom In", "Zoom Out", "Original Size" and "Fit Size".



## 4.4 Grid Tools

Grid tools include "Ruler", "Grid", "Grid Alignment", "Grid Setting".

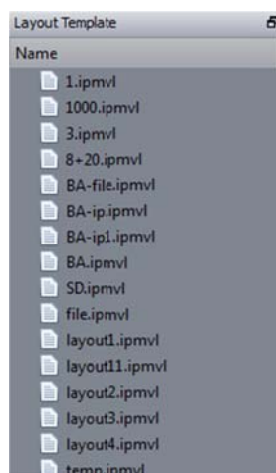


# 5 Resource Selection Area

Resource selection area include "Layout Template" and "Toolbox".

## 5.1 Layout Template

1. Choose 『Dock Widget』 option in the 【View】 menu, and select 『Layout Template』 option, the layout template window will be shown at left side of window to display existing layout templates.



2. Right-click the blank area of layout template window, can choose Import Layout and New Top Folder.

## 5.2 Toolbox

1. Choose 『Dock Widget』 option in the 【View】 menu, and select 『Toolbox』 option, the toolbox window will be shown at left side of window. There are following objects:



2. Every objects have their own properties. Users can drap-drop them into layout design area.

## 6 Element Property Area

Element property area shows "Properties" of all elements.

### 6.1 Properties

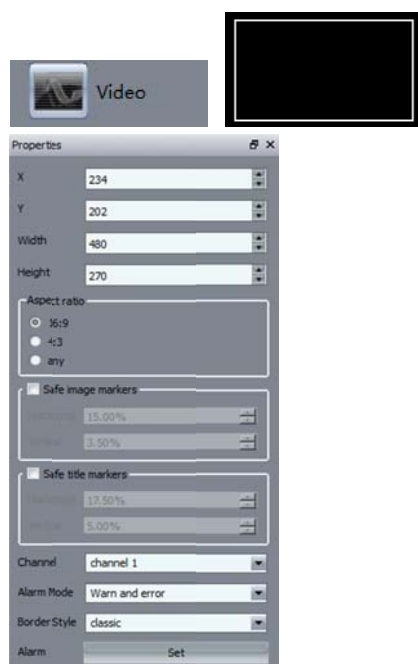
1. Choose 『Dock Widget』 option in the 【View】 menu, and select 『Properties』 option, the Properties window will be shown at right side of window. In the process of layout design, setting properties of layout can help achieve desired effects.
2. Choose one of elements in layout design area, such as video, then set video properties in corresponding properties window.



3. Next introduce property parameters included in each properties window.

#### 6.1.1 Video

Click video element in layout design area, can set relative parameters in corresponding window.



### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: Width of video.

『Height』: Height of video.

Width and height are self-adaption according to predefined aspect ratio.

### 2) Aspect ratio

『16:9』: Aspect ratio is 16:9.

『4:3』: Aspect ratio is 4:3.

『any』: Can set aspect ratio to any.

### 3) Safe Image Makers

『Horizontal』: Horizontally indicate the range of displayed image.

『Vertical』: Vertically indicate the range of displayed image.

### 4 ) Safe Title Makers

『Horizontal』: Horizontally indicate the range of video title.

『Vertical』: Vertically indicate the range of video title.

### 5) Channel Setting

『Channel』: Set channel associated with this video.

**Please notice different video windows must be associated with different channels; this channel number specifies a logical channel group, the elements like video, audio meter, alarm label.etc with same channel number can be allocated with same physical signal source.**

#### 6) Alarm Mode

『Alarm Mode』: Alarm mode is warn and error for default, i.e. when video occur black field or frozen video, warn and error are both displayed. other options include no warn, error, warn which represent no alarm, just error alarm and just warn alarm.

#### 7) Border Style

『Border Style』: Currently just have classic style.

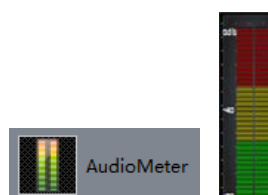
#### 8) Alarm

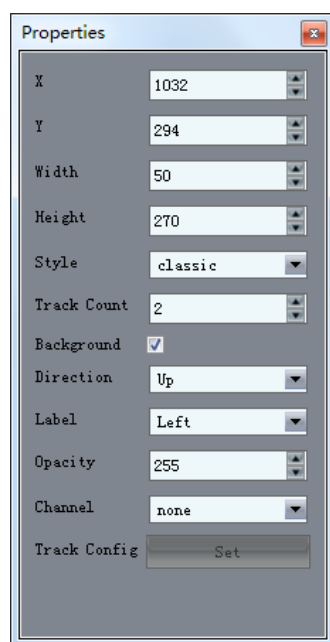
『Alarm』: Click alarm set to pop-up【monitor】window. Users can choose probing items according to practical use.



## 6.1.2 Volume Meter

Click audio meter element in layout design area, can set relative parameters in corresponding window.





### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of meter, the unit is pixel.

『Height』: The Height of meter, the unit is pixel.

### 2) Style

『Style』: Currentlu just have classic style.

### 3) Track Count

『Track Count』: At least is 1, at most is 16

### 4) Background

『Background』: If check this option, audio will present gray background.

### 5) Direction

『Direction』: Currently just support UP.

### 6) Label

『Label』: Label could be none, left and right.

### 7) Opacity

『Opacity』: In case have background, opacity is also effective for background.

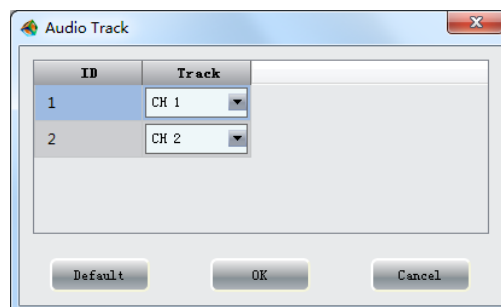


## 8) Channel

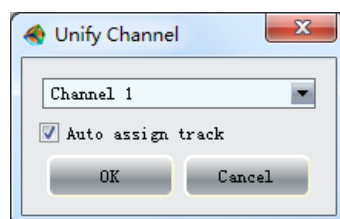
『Channel』: Associated channel.

## 9) Track Config

『Track Config』: Can allocate different channels for each track.



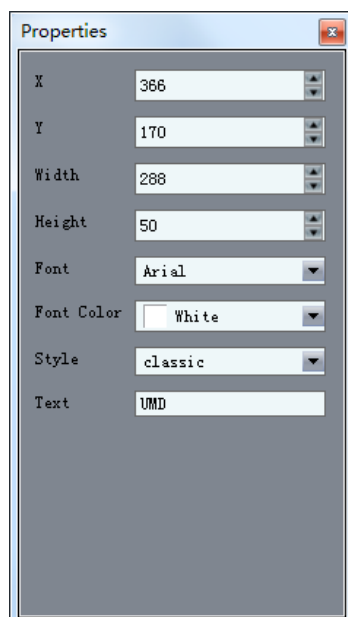
Can also choose audio meters which associated with same channel, then choose "Unify Channel" option, and check Auto assign track in right-click menu to complete channel setting.



## 6.1.3 UMD

Choose UMD object in layout design area, users can edit its properties in the Properties window. UMD info can realize dynamically follow name of its signal source.





#### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of UMD, the unit is pixel.

『Height』: The Height of UMD, the unit is pixel.

#### 2) Font

『Font』: Arial and Courier New can be chosen.

#### 3) Style

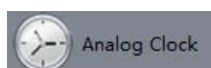
『Style』: Currently just have classic.

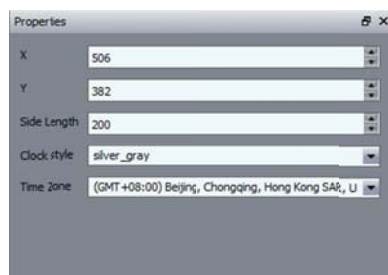
#### 4) Text

『Text』: Users can manually input UMD, as well as follow name of its signal source.

## 6.1.4 Analog Clock

Choose analog clock in layout design area, users can set relative parameters from corresponding Properties window.





### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Side Length』: The diameter of clock.

### 2) Clock style

『Clock style』: silver\_gray and silver\_white are alternative.

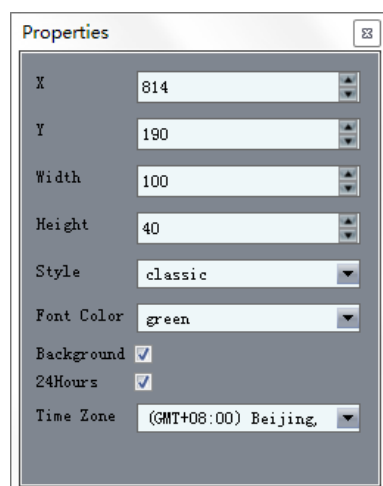
### 3) Time Zone

『Time Zone』: Can choose from drop-sown list according to real time zone.

## 6.1.5 Digital Clock

Choose digital clock in layout design area, users can set relative parameters from corresponding Properties window.





### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of digital clock, the unit is pixel.

『Height』: The Height of digital clock, the unit is pixel.

### 2) Style

『Style』: Currently just have classic.

### 3) Font Color

『Font Color』: Red and green could be chosen.

### 4) Background

『Background』: If checked, digital clock has grey background.

### 5) 24 Hours

『24 Hours』: If checked, time will be displayed in 24 hours format, otherwise, in 12 hours format (with am and pm)

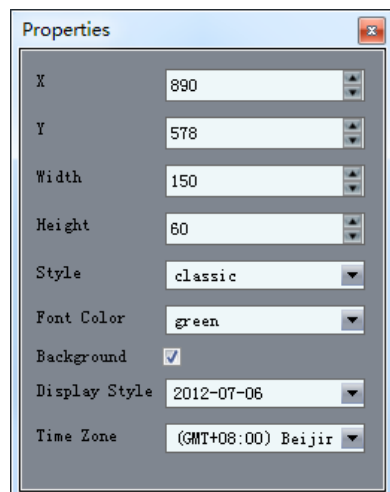
### 6) Time Zone

『Time Zone』: Can choose from drop-sown list according to real time zone.

## 6.1.6 Date

Choose date object in layout design area, users can set relative parameters from

corresponding Properties window.



#### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of date object, the unit is pixel.

『Height』: The Height of date object, the unit is pixel.

#### 2) Style

『Style』: Currently just have classic.

#### 3) Font Color

『Font Color』: Red and green could be chosen.

#### 4) Background

『Background』: If checked, date has grey background.

#### 5) Display Style

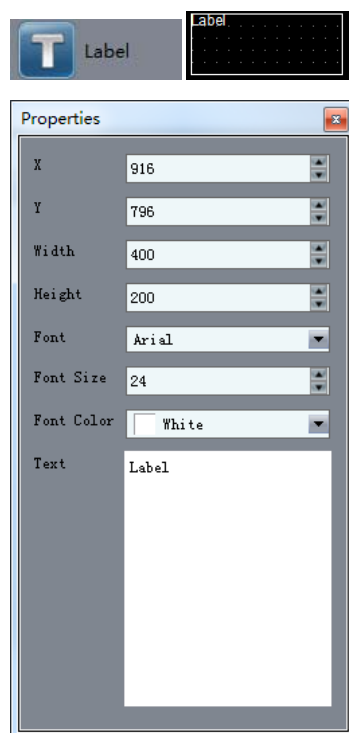
『Display Style』: Take 2012-06-19 for example, there are 6 styles: 2012-06-06, 06-06-2012, 06-06-2012, 2012-06-06 Wed, 06-06-2012 Wed and 06-06-2012 Wed.

#### 6) Time Zone

『Time Zone』: Can choose from drop-sown list according to real time zone.

## 6.1.7 Text Frame

Choose text frame in layout design area, users can set relative parameters from corresponding Properties window.



### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of text frame, the unit is pixel.

『Height』: The Height of text frame, the unit is pixel.

### 2) Font

『Font』: There are Arial and Courier New.

『Font Size』: Choose based on practical use.

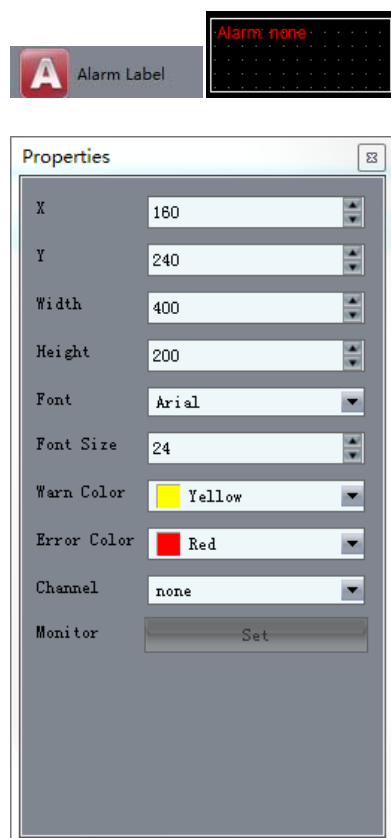
『Font Color』: Multiple colors can be chosen.

### 3) Text

『Text』: Input text you want to display on the screen.

## 6.1.8 Alarm Frame

Choose alarm frame in layout design area, users can set relative parameters from corresponding Properties window.



### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of alarm frame, the unit is pixel.

『Height』: The Height of alarm frame, the unit is pixel.

### 2) Font

『Font』: There are Arial and Courier New.

『Font Size』: Choose based on practical use.

### 3) Color

『Warn Color』: Yellow for default, multiple alternatives.

『Error Color』: Red for default, multiple alternatives.

#### 4) Channel

『Channel』: Associated channel

#### 5) Monitor

『Monitor』: That is video and audio alarm setting.

## 6.1.9 Metadata Frame

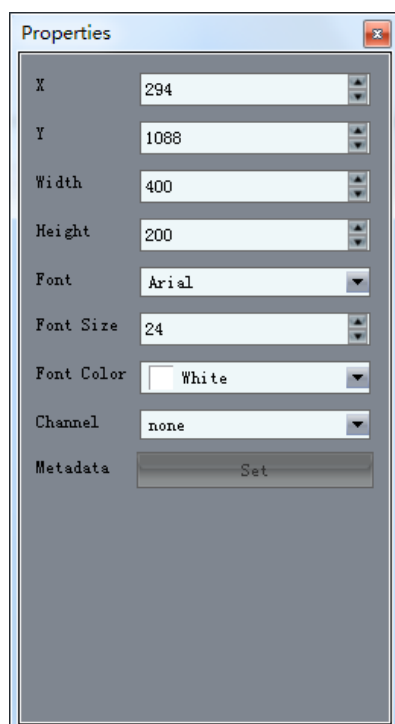
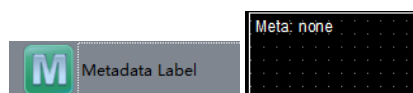
Metadata includes:

Program: Program name, PID.

Video: video format, video resolution, video code rate.

Audio: Track count, format, sample rate, quantization bits, code rate.

Users can know some important info via metadata.



#### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.



『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of metadata frame, the unit is pixel.

『Height』: The Height of metadata frame, the unit is pixel.

## 2) Font

『Font』: There are Arial and Courier New.

『Font Size』: Choose based on practical use.

『Font Color』: Multiple colors can be chosen.

## 3) Channel

『Channel』: Associated channel

## 4) Metadata

『Metadata』: Click Set button to pop-up 【Metadata】 window.

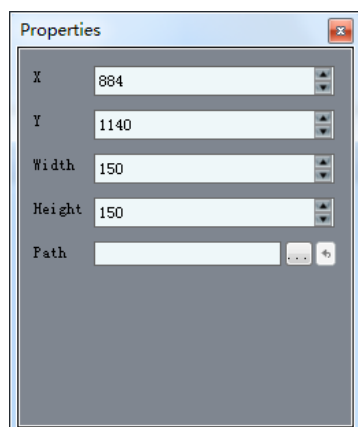


Check metadata you need to display them in layout.

## 6.1.10 Image

Choose Image in layout design area, users can set relative parameters from corresponding Properties window. Current supported formats include: .jpg, .png, .tif and .bmp.





### 1) Position parameters

『X』: Horizontal position coordinates relative to top left corner, the unit is pixel.

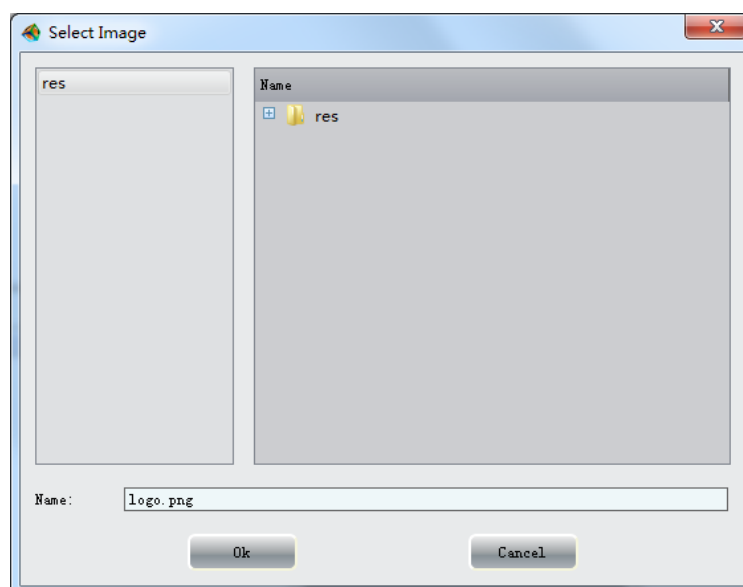
『Y』: Vertical position coordinates relative to top left corner, the unit is pixel.

『Width』: The width of image, the unit is pixel.

『Height』: The Height of image, the unit is pixel.

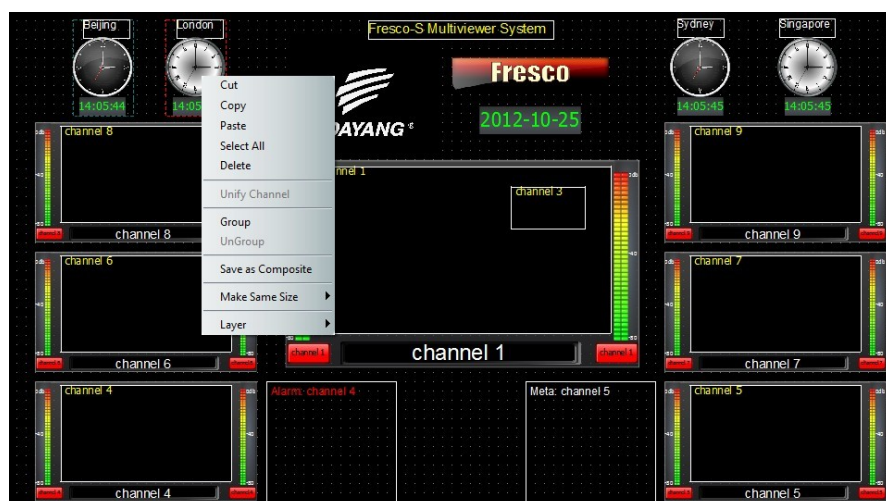
### 2) Path

『Path』: When choose path here, for default enter res folder, and choose needed image here.

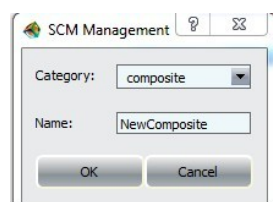


## 6.1.11 Composite Element

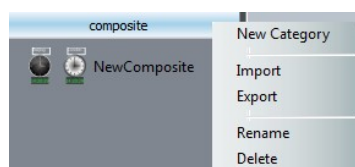
Choose multiple elements and right-click to show menu, choose 『Save as Composite』.



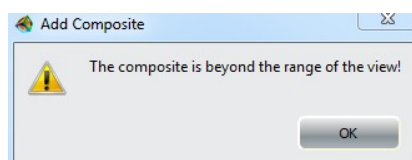
"IPCM management" window will be shown, users can name and classify new composite. like following picture to show, the name is "NewComposite", category is "composite".



Click OK, composite element will be shown under the toolbox. Right-click composite to pop-up the menu with New Category, Import, Export, Rename and Delete options.



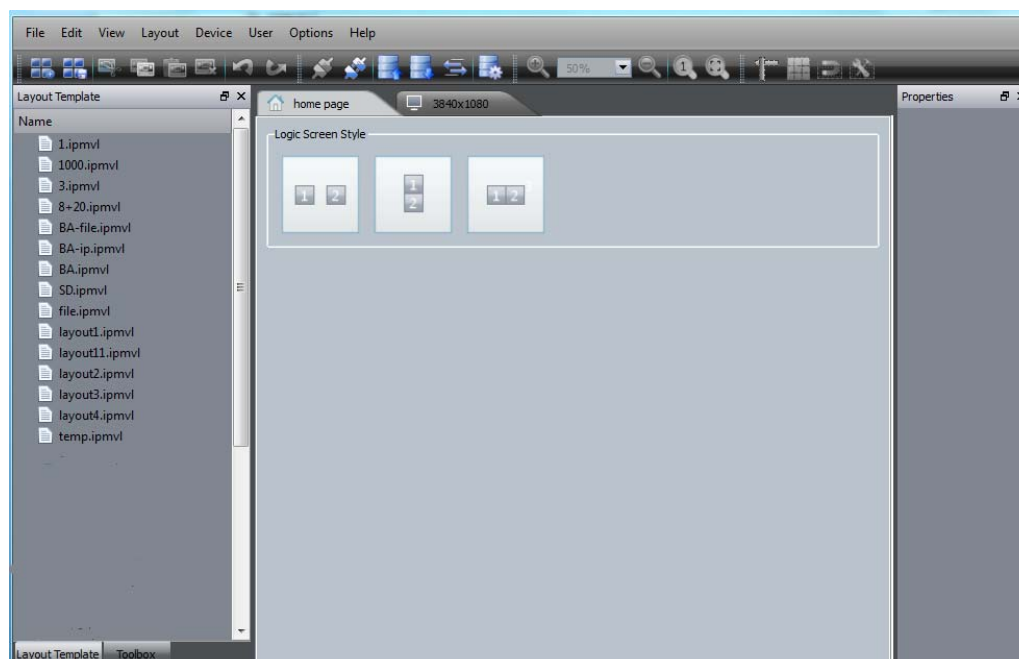
When the resolution of a composite (like 3840x1080) is higher than the resolution of layout design area, namely current logical screen (like 1920x1080), the Add Composite window will be displayed to show users "The composite is beyond the range of the view!"



A composite with resolution less than or equal to 1920x1080 can be used in any resolution of layout design area. This function makes layout editing convenient and fast.

## 7 Layout Design Area

Layout design area of IPCM management software include "home page" and "3840x1080 (current layout)".



1. Home page includes logical screen style and current layout style,. choose a logical screen style, for example 3840x1080, this layout will be displayed in new added tab at right side of home page.

### 7.1 Layout uploading and display

Drag-drop needed elements to layout design area, and adjust layout by use of tools in menu bar and toolbar, in the meantime, can also set each element properties in properties window. After settings, save layout, and upload it to device terminal to see display effect.

When upload designed layout to device terminal and display it on the screens, the elements displayed on the screen may occur position offset relative to the position in original layout. In case of this phenomenon, we recommend that for video, set the value of X coordinates to integral multiple of 4, for alarm frame, metadata frame, set the value

of X coordinates to integral multiple of 2, a

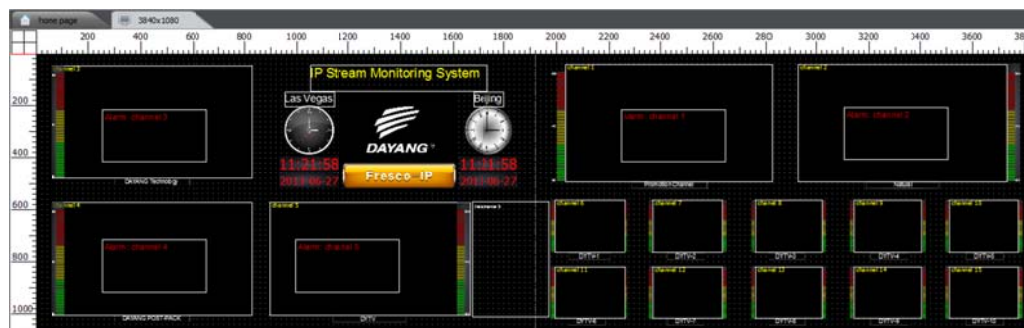
nd turn on grid alignment option in the toolbar, and set grid increment to integral multiple of 4. In this way, the element we drag-drop into layout design area will automatically align points of grid to eliminate offset.

Due to this function is based on picture pixel, when the value of X is not integral multiple of 2 or 4, after layout is uploaded to server, the system will adjust automatically the positions of elements on the basis of correct pixels so that make the offset value to be integral multiple of 2 or 4.

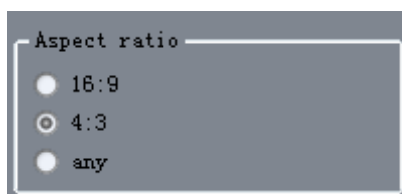
## 7.2 Layout Design Note

### 7.2.1 Layout design

The method of design layout can be classified into online and offline design. after offline design, save layout and connect control terminal with Fresco server and then upload layout. The picture below will be an example to illustrate layout design.




1, drag-drop video window and audio meter to proper position, modify AR of video



window to what you want:

2, put audio meter into right position, the number of audio column in one audio meter can be modified, generally we choose 1 column in one audio meter, then copy and paste this audio meter, put it on the other side of video window, modify its

Properties-Label: , choose both two audio meters then

press  button to align bottom.



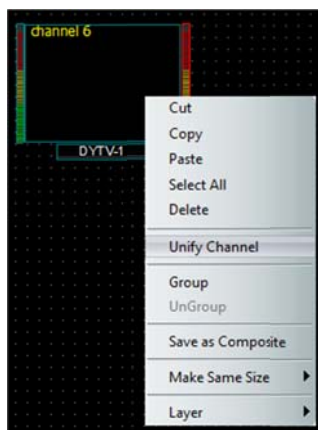
3, drag-drop UMD to the bottom of video window or any position and use



to arrange all elements in order.

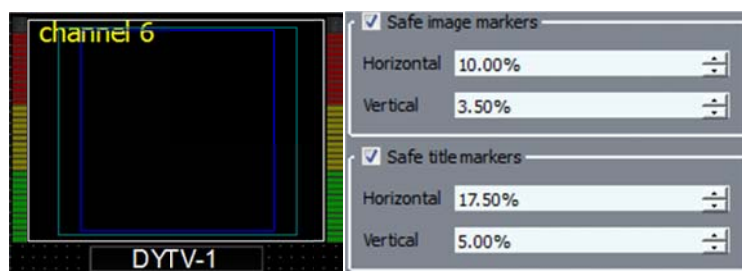


4, choose all above elements , right-click and choose Group, then choose Unify channel.



5, use above method to produce similar layout, like picture below:

1) click on video window, modify its properties, you may add safe image maker and safe title maker.



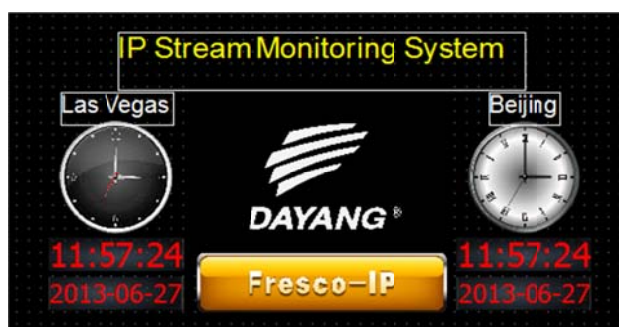
2) Set AR: 16:9.



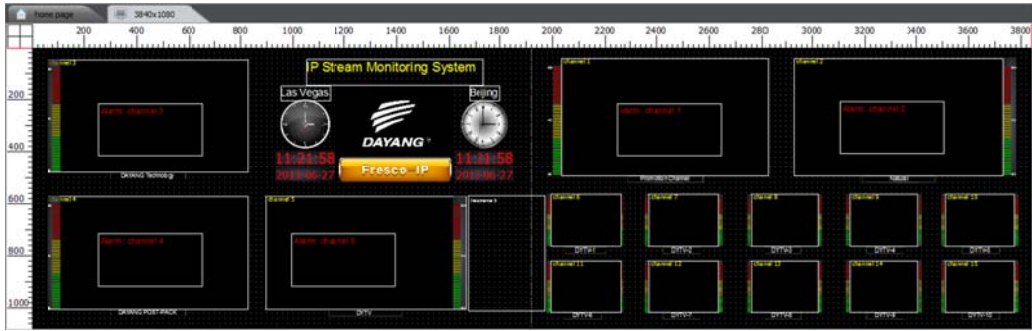
3) Add Metadata label alarm label beside or inside video window



4) More types of elements, such as analog/digital clocks, text, images can be added into layout:



5, use  to make all elements in order.

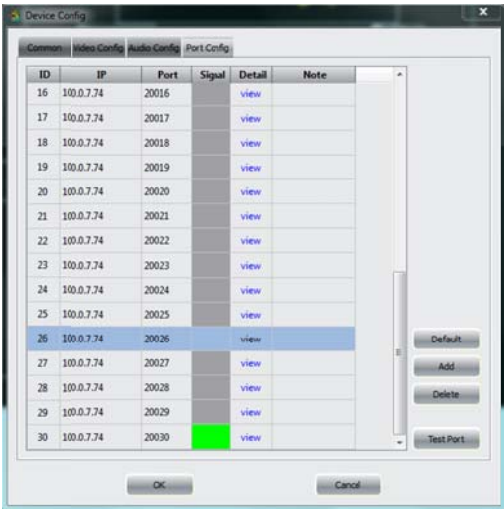


the layout can be produced according to above method. if you have any special needs, please contact our technical staff to perform analysis.

### 7.2.2 Signal Assignment

When you think you have finished layout design, next should assign signal sources for elements of layout.

- 1, Add signal sources in Device-Config-Config-Port config menu (please refer to 3.5.4.1)



Click Add button, input correct IP address and port number,

30	100.0.7.	20030	view
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Check port validity by click of "Test Port" button, if Signal column is green, this IP stream is valid.

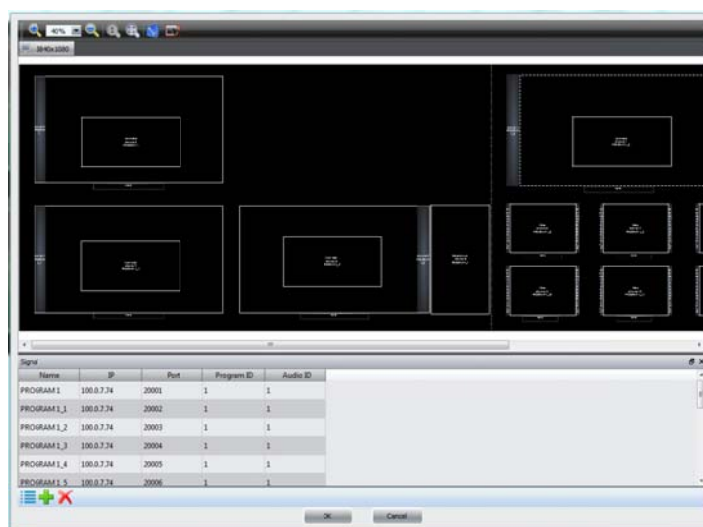
- 2,

#### Offline signal assignment

Offline signal assignment enable signal assignment when control software is not




connected with Fresco-IP server, go Edit-Signal config, following window is popped up:

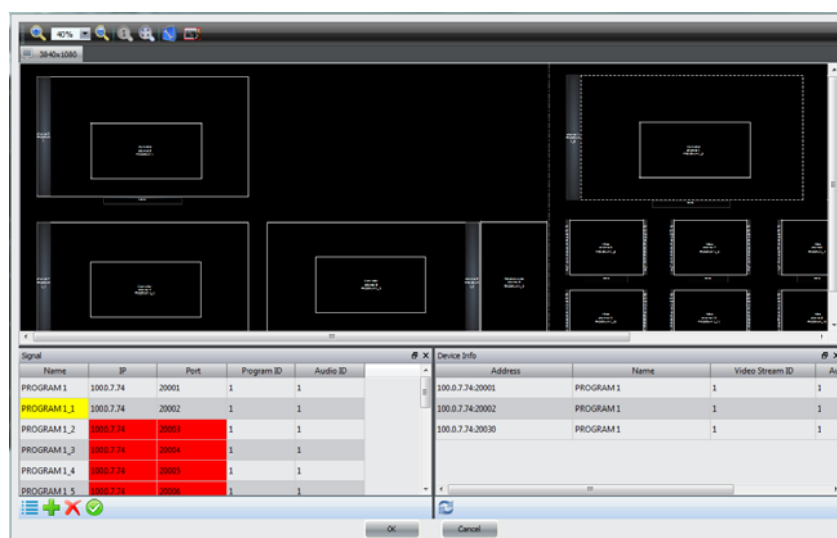


Manually input name, IP address, port number, program ID and audio ID for each signal source, then drag-drop signal sources into upper video windows to finish signal assignment, click OK to save.

**By use of offline signal config, you cannot see valid incoming IP streams and cannot check signal availability.**

### Online signal assignment

Online signal assignment can be used as long as control client has been connected with Fresco-IP server. Click upload , following window is popped up:



In this window, you can see incoming IP stream in "Device info", and can check signal source availability (see 3.5.3.1), then drag-drop signal sources into upper video windows

to finish signal assignment, click OK to upload.